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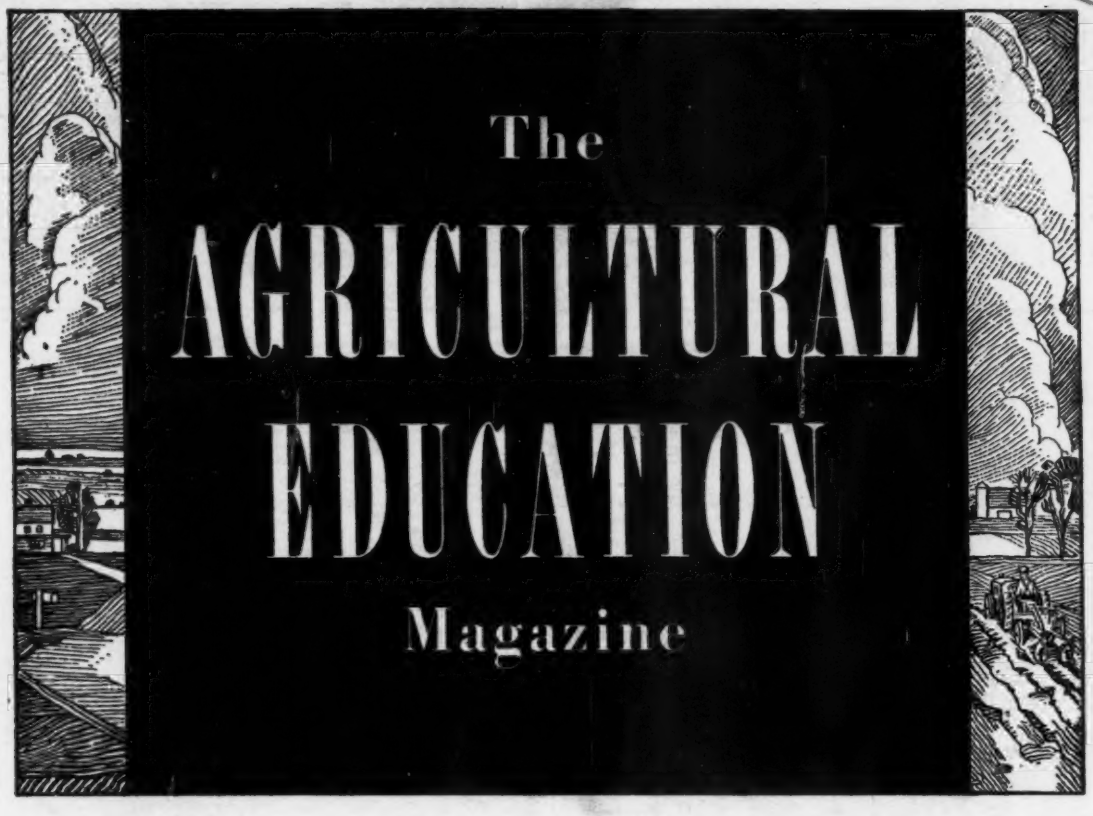

ABOUT the most practical thing we can do for our older rural youth is to see to it that in every community the right people are located on the right farms and are equipped to live and operate under the right environment.

—Reuben Brigham.

The Agricultural Education Magazine

A monthly magazine for teachers of agriculture. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by the Meredith Publishing Company at Des Moines, Iowa.

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Editorial Comment

Important Aspects of Leadership Training

ALTHO some attention has been given to leadership training since the beginning of agricultural education, the past few years have seen increased activity designed to prepare FFA officers for their responsibilities. An article appearing about a year ago, written by Higgins of Nevada revealed that a large number of states now have state camps, many of which feature leadership training. Many states, and districts or counties within states, conduct leadership conferences. Featured in this issue are several articles dealing with the subject.

While this splendid work of providing special training for incoming officers is taking place local advisers should be mindful of at least two needs which should be met. The first is that the adviser himself has a responsibility, and perhaps the best opportunity to train leaders. The fact that local chapter officers attend a leadership conference should not lessen the local adviser's responsibility. There are many types of instruction which he can best give locally. If the training which officers get at a leadership conference is not preceded by good instruction and adequately followed up it may be relatively ineffective. We have been able in a leadership conference to identify rather easily the officers who have received good local training and those who have not.

The other point to keep in mind is that FFA officership is not an end in itself, but a means to an end. We should not just train boys so that they will become good officers. We should see that potential leaders become officers so that they can receive the needed training. The educational growth of the boy while in office is more important than the record the boy makes as an officer.

When boys are inducted into office an adviser should not assume that because they have a school of instruction his job is merely to "supervise" their activities. It is his responsibility to provide experiences for them which will continue to develop them. He can do some intensive teaching with these boys, not just to prepare them for office, but because they are officers.

When Will Young-Farmer Classes Come Into Their Own?

THE last "Digest of Annual Reports of State Boards for Vocational Education to the U.S. Office of Education," as well as previous digests, shows an increase in the number of part-time classes taught, but still considerably less than the number of adult classes, and far below the number of all-day classes. This showing, after 23 years of the operation of the National Vocational Education Act would indeed have been disheartening to the sponsors of the Federal legislation could they have foreseen it at the time.

It has been shown that the number of young men out of school on farms between the ages of 16 and 25 is usually larger than the number of boys enrolled in all-day classes in agriculture in the same communities. It has also been shown that young men who are trying to become established in farming are interested in systematic instruction. The 308,325 pupils enrolled in all-day classes in 1939-40 are practically all potential part-time students in 1934-44, assuming they are a selected group to begin with, so far as intentions of farming are concerned. Will there be three hundred thousand young men enrolled in part-time classes by that time, even counting those who are older or younger than this group?

Some teachers in every state have demonstrated the feasibility of part-time instruction. Why, then, do young-farmer classes lag behind other types?

Many explanations might be given, but the crux of the matter boils down to the simple fact that teachers, teacher educators, and supervisors have not given the time and thought to problems of young farmers that they should. Many do not distinguish between young farmers and adult farmers in theorizing about what should be done, or in actually working with them. They often use, or advocate the use of the same methods and similar ways of promotion and organization of classes without making a thoro study of the characteristics and needs of young farmers.

On the other hand, teachers are generally required to use the same terminology in reporting supervised practice, and to produce the same or similar statistical records for young farmers out of school as for regularly enrolled day-school students. Why should not students enrolled in young-farmer classes be recognized as a distinct group in their own right so that such reports could be adapted to their own needs?

Recently there has been a great deal of research, writing, and some action on the subject of establishing young men in farming. It is probable that we shall see more of it in the years to come. But if the problem of establishment in farming is studied only in an academic way, or if it be assumed that the problems can be solved largely by individual help by the teacher plus four years of all-day instruction, mostly taken by boys before they had met problems of establishment, then we shall fall far short of our goal.

It is time to be realistic about the needs of young farmers and the limitations of all-day classes. It is time for young-farmer classes to come into their own.

Whose Responsibility Is It?

IN THE August issue of *Land Policy Review* is an article by Sherman Johnson of the Bureau of Agricultural Economics, U.S.D.A., entitled "Farm Consultants: for a National System". In this article Mr. Johnson advocates the employment of a "consultant" in every county to assist farmers with their management problems. Such a person would work with farmers above the level of those served by the FFA and "could give good service by working with groups of farmers that have similar problems and adjustment opportunities." It is further suggested that "the first job would be to work with the farmer in developing a long-time plan for the farm and the year-by-year steps to achieve it", and that the aid should "help the farmer adopt improved practices for old enterprises, as well as the best techniques for new ones.

The reader has to pinch himself occasionally to make sure he is not reading an article describing the responsibilities of teachers of vocational agriculture with adult classes. Mr. Johnson also advocates an apprenticeship training system to be worked out for the younger men who are to remain on farms. No mention is made of the public school system nor is any hint given that there would be any relationship with our publicly supported and controlled educational institutions. In fact, there is evidence of a note of distrust of our present programs when he says, "This method of agricultural education would be a departure from our traditional, 'book-learning' courses, but it seems to fit the problem better than the customary approach."

If Mr. Johnson were to inspect the work being done by successful teachers of agriculture thruout the country he would find they had departed very far from what he calls traditional book learning. However, as teachers, we would probably admit that we are not yet doing all that might be done to get young men established in farming or to assist adult farmers to make readjustments in the light of present demands.

The important question in this discussion, however, is, "Can and should teachers of agriculture do the kind of thing which Mr. Johnson says should be done for farmers." If so, then there is no need of duplication by bringing in other persons for this service. If this is not a job for teachers what is the reason? Is it because teachers of agriculture feel that giving individual help to farmers is not a part of their job or that they are not qualified? Apparently there are a few people outside the profession who feel that teachers of agriculture are either not to be trusted with the task of giving individual and group instruction to adult farmers, or that such work is not a part of the responsibilities of teachers of agriculture.

Altho many would not agree with all that Mr. Johnson advocates we can agree on the needs as outlined. Herein lies the challenge to teachers who want to render more educational service to the farmers of their communities.

A. K. GETMAN **Professional** R. W. GREGORY

Agriculture and the War

PROFESSOR D. B. JOHNSTONE-WALLACE,
Cornell University

"THE last war was decided by food shortage, apart from the aid supplied by America." This statement was made by the Rt. Hon. David Lloyd George, British Prime Minister in the last war. History is likely to repeat itself, and there is little doubt that in the last analysis agriculture will play an extremely important part in determining the outcome of the present struggle.

Today, as never before, the civilian population is called upon to face dangers and hardships which hitherto have been largely confined to the actual combatants. For this reason the maintenance of morale has become more difficult and more important than in any previous war.

Morale Influenced by Diet

It is recognized by military experts that ultimate victory is likely to go to the nations whose morale is best able to stand the strain of modern warfare. This morale, while a somewhat intangible quality, is influenced profoundly by the mental as well as by the physical condition, and both of these are influenced by the diet. A people may become willing to give in and sue for peace, because of lowered morale, long before a condition of actual starvation occurs, provided the diet is insufficiently well balanced to maintain health of mind and body.

The battle of the Atlantic which is now being waged, is an effort on the part of Great Britain to keep the seas open for the transportation of needed food supplies as well as munitions of war for her own use, while enforcing a blockade which will deny foodstuffs, and supplies of oil, rubber, textiles, certain metals and certain fertilizers to Germany and nations dominated by her.

In the last war Great Britain faced a less difficult task than she faces today. The French Navy helped to keep open the seas. The French coast was not in enemy hands, and two strategically important naval bases at Lough Swilly and Berehaven in Ireland were available to simplify the protection of shipping on the Atlantic.

The blockade was ably and strictly enforced, and as a result a serious deficiency in fats occured which, when long continued, finally resulted in such lowered morale that internal collapse of resistance occurred.

I well remember the indications which were so much in evidence in the final stages of the last war, after the tide had turned and the Germans were in retreat. Not only was there evidence of inadequate diet but there was also a definite shortage of essential aids to war. Their gas masks were made of leather because of the shortage of rubber. Motor trucks

D. B. Johnstone-Wallace

were fitted with steel tires on springs, as rubber was no longer obtainable. Sandbags were made of paper and there were substitutes for many of the things which we consider essential for our daily life.

The greater part of Professor Johnstone-Wallace's professional career has been as a principal of a college of agriculture in England. Since 1931 he has been Professor of Agronomy at Cornell University. In 1938 he spent several months in an intensive study of food production in most of the European countries. His broad sweep of the basic problems of food in the present war will challenge the thinking of every reader of this magazine. The article is a report of an address given before the Thirtieth Annual Conference of the Teachers of Agriculture of New York, July '41.—A.K.G.

In spite of careful preparations and the advances made by science, there are indications that certain shortages are already being felt in consequence of the British blockade. Shortages of fats, lubricating oils, gasoline, rubber, textiles, and metals are being aggravated by carefully planned attacks on these weak links in the chain, and account for much of the strategy which is so difficult for the onlooker to understand. There have been constant attacks on oil depots, and you have heard of the attacks made on supplies of fish oils in Norway, all of which have been undertaken because of the realization that the best results are likely to be achieved by concentrating on the weakest links. The entry of Russia into the war will, unless she is speedily defeated, result in further curtailment of supplies of oil, food supplies, and in addition, supplies of phosphorus, so essential for crop production in Germany and occupied territories.

Food Situation in Europe and America Compared

It is somewhat easier to understand the part played by agriculture in this war if we are able to obtain a fairly clear mental picture of the general food situation in Europe compared with this country.

In the United States as a whole we have available 15.8 acres of land per head of the population and we are therefore naturally considerably more than self supporting. In New York State, however, which is not self supporting, as you will realize when you consider the amount of grain, meat, vegetables, and other foods imported from other states, we have 2.5 acres per head.

In England, on the other hand, the land available per head is only 0.8 acres, while for the United Kingdom it is 1.3 acres. Because of this, and in spite of the intensity of her agriculture, England cannot hope to support her own population on food supplies grown at home. The best she can hope to do is between about 50 and 75 per cent of her requirements, and this is no mean achievement.

Germany and Italy, while more nearly self supporting, are not very much better off. Germany has 1.8 acres per head and Italy 1.9 acres. You may think that some relief will be provided by the conquered territories, but this is far from the case as most of them are unable to support themselves. Holland and Belgium have only 0.9 acres per head Poland 2.1, Czechoslovakia 2.3, Denmark 2.8, Austria 3.1, and France 3.2 acres. Norway, on paper, is better with 17.8 acres but as this is mostly rocks, with only about four percent capable of cultivation, it also is a liability rather than an asset. The Balkan countries with four acres per head are somewhat better than self supporting in times of peace, but doubtfully so in time of war. Russia alone, with 31.8 acres per head, is in a position to produce more food than she needs, but transportation difficulties are so great that there may be a condition of plenty in one part of the country while famine prevails in another.

After the discovery of the New World, European agriculture underwent a great change and many countries found it unprofitable to grow the cereals required for human food because of the cheapness with which it could be obtained from this hemisphere. Because of this they gradually evolved a type of agriculture in which use was made by the farmer of the imported grains available at low cost. The farms became largely

conversion factories in which purchased grain was transformed into the more expensive food products, especially milk, butter, cheese, bacon, meat, and eggs. In the case of Holland, Denmark, and France, quantities of these foods were available for export to England during peacetime, but the cutting off of imported foods by the British blockade has rendered the raw materials unavailable, and these countries are no longer in a position to export, but rather face a difficult problem in producing their own needs.

Producing Food in Wartime

Now let us look more closely into British agriculture to study the principles involved in wartime food production.

England itself, without Scotland, Wales, and Northern Ireland, covers an area approximately the same size as New York State, but on this comparatively small area she carries a population of 39 millions, whereas New York State, including New York City, carries only 13 millions.

I understand that people living in the western states have considerable difficulty in looking upon New York as an agricultural state. They picture it as one large city where there can be little room for agriculture. We in New York are inclined to fall into the same error concerning England. Agriculture is still England's largest industry as it involves the use of 370,000 farms occupying 30 million acres and employing more than one million people.

Because of the favorable soil and climatic conditions prevailing, and the high standard of farming adopted, England is more nearly self supporting than might be expected, in spite of the fact that more than two thirds of the land is in grass during times of peace. Approximately 15 million tons of food for human consumption and 30 million tons for animal consumption are produced annually, whereas 11 million tons of food used for human consumption and eight million tons used for animal consumption are imported. The grasslands of Great Britain are her most valuable asset during time of war, and because of them she alone, of all the nations at war, is in a position to expand the production of human food by an amount which approaches 50 percent.

Importance of Grasslands in Great Britain

The first step taken on the outbreak of war was to plow out all grassland suitable for the purpose which could possibly be spared. During the first year approximately one million additional acres came under the plow and there has been still further expansion of the area since that time.

The British farmer, by tradition, has always taken a pride in grassland farming. His pastures and meadows are more frequently found on the best land of the farm rather than the worst, and they receive fertilizer treatment and careful management which make them extremely productive. It is a custom in some parts of the country to put up for auction each year the grazing rights on some of the most productive pastures in certain parts of the country. Recently in an English agricultural paper I saw a report that the grazing rights on a pasture in Lincolnshire had recently brought at auction the equivalent of $70 per acre. Remember this is not the purchase price of the land but the rent paid for the privilege of grazing one acre for one grazing season!

Such pastures possess within them an amount of stored up fertility which it is not easy to fully appreciate. It is sufficient to say that it is the plowing up of these grasslands which makes possible the enormous increase in the production of food for human consumption which is of such tremendous importance to Great Britain in time of war. The development of British grasslands is also shown to be a much wiser policy from a national defense point of view than the policy of reforestation which has been so widely advocated in this country.

The economic position of England in peacetime largely determines her type of agriculture. The large population results in a heavy demand for fresh milk which must be produced at home. Her position as a manufacturing country makes it necessary to provide food as cheaply as possible, if wages and costs of production are to be kept sufficiently low to permit the export of manufactured products in competition with other countries on the world market. Because of this, foodstuffs are imported in large quantities from all over the world without tariff restrictions, and the ships that bring the foodstuffs depart laden with manufactured products. Taxation and other considerations make it difficult for the British farmer to grow grain feed as cheaply as he can purchase it from abroad, and he has therefore adopted a system of farming in which he can make use of the opportunity presented to purchase grain feeds at low cost. In wartime, unfortunately for him, his whole system of farming must be changed because it is too wasteful of what we may call food units.

I can best illustrate the principles involved in this way:—

A farmer may have one acre of good pasture which he uses for the production of beef. From this acre he might expect a return of approximately 10 food units —of 22.4 pounds starch equivalent— in the form of beef at the end of the year. In wartime he might be instructed to plow out this acre, and if he decided to grow oats, he would expect a yield of 60 food units. From the point of view of feeding the human population there has therefore been a gain of 50 food units per acre, provided the Englishman can be persuaded to be satisfied with porridge like the Scotchman. However, if he decided to feed the oats to beef cattle instead, the best that he could expect in the form of beef from his ton of oats would be approximately eight food units, so that the country would be worse off than if the field had been left in grass. In peacetime profit, rather than the good of the country, would determine his course of action, and it might be profitable to feed the oats to beef cattle, since each food unit in the form of oats would be worth about 32 cents on the market, whereas the beef would be worth about $8 per unit.

From a national point of view, there are crops superior to oats from the point of view of human food production. Wheat is capable of yielding about 75 food units per acre, while potatoes come to the head of the list with a production of about 150 food units, and under favorable conditions often much more than this. It is for this reason that all nations engaged in war devote so much of their land to wheat and potatoes.

Germany's Agricultural Research Keyed to War Needs

When I left this country in 1937 to make a tour of Great Britain, Norway, Sweden, Denmark, Germany, Austria, and France, the danger of war was in everyone's mind. In spite of this, I felt inwardly that the risk was not very great and that the policy of Hitler was to make threats of a type which would give him what he asked for without the necessity of fighting, and that he would change his tone as soon as resistance was offered rather than risk another World War. I continued to hold this view during my tour of Great Britain and the Scandinavian countries, but I changed it within a few hours of entering Germany, as soon as I visited the Agricultural Experiment Station at Keil near the Keil Canal. This change was brought about by the realization that every piece of agricultural research in progress had as its object the production of increased supplies of human food in the event of war.

One experiment which brought home to me the real truth of the preparations in progress was an experiment in which the attempt was being made to determine the way in which silage could be produced from potato tops without sacrificing the yield of tubers appreciably. The experiment was apparently successful, and I remembered that in the last war the plowing up of land used for pasture, hay, and forage-crop production in order to grow potatoes, had lead to decreased milk production, and therefore had contributed greatly to the shortage of butterfat upon which the health of the population so much depended.

On my return to this country I wrote an article in an English agricultural paper explaining what I had seen and warning the British Government of the seriousness of the situation and of the need for attention to British agriculture. I believe it did some good, but the British people at that time were deluding themselves by wishful thinking, much the same way as many of us are still doing here today.

Steps Taken in Britain to Feed the People

Thanks to the work of Sir John Orr of the Rowett Research Institute in Scotland, the British Government has received valuable guidance concerning the problems of feeding the population. Every effort has been made to encourage the people to consume cereal foods direct, and to restrict the consumption of meat. Such meat as is produced is largely coming from the unplowable grasslands. The use of imported grain for meat production is seen to be unsound when it is appreciated that it would be more economical of shipping space to import 12 tons of meat than to import the 100 tons of grain required to produce it.

Sir John has also laid down certain guiding principles in the shipping of foods so that priority will be given to foodstuffs which provide the greatest amount of food per cubic foot of shipping space. On this basis wheat, butter, and other fats, sugar, cheese, and dried

fruits, rank very high; while bacon and eggs, altho desirable in the diet from the point of view of health and variety, are relatively high priced foods which occupy a large space in proportion to their feeding value.

In considering shipping space it is well to remember that available space is curtailed not only by shipping losses but also by the reduced speed of ships traveling in convoy. At the same time, every foot of space which can be spared must be reserved for the munitions of war which this country is able to supply.

The use of grain in the feeding of animals has been drastically restricted, and rationing cards have been provided for certain classes of animals. Preference is given to those animals which are most efficient as converters of grain into other more valuable food. In this the dairy cow ranks first because of her ability to produce on the average about one pound of dry matter in the form of milk for every five pounds of dry matter fed. The pig comes a good second with a ratio of eight to one, while the hens' doom has been sealed by her inability to do better than 15 to 1. Beef cattle are still less popular, and are only saved from elimination by their ability to use unplowable grassland as their efficiency is only in the order of about 20 to 1.

Food Values in Grass

It is an ill wind that blows nobody any good, and the war has done some good to British agriculture by drawing attention to the value of grass silage. Sir John Orr in recent experiments has fed cows for two months on a diet of grass silage alone. The cows consumed an average of 150 pounds per head per day, and production was maintained at 50 pounds of milk per day without loss of weight during the period of the experiment.

These experiments confirm information recently obtained at Cornell which indicate that a cow on a good pasture with a dense sward about four to five inches in height is able to consume in a day about 150 pounds of green herbage containing sufficient total digestible nutrients to maintain her at constant weight while producing about 50 pounds of milk per day. The problem is to provide her every day with the type of pasture which makes this achievement possible.

The possibility of utilizing grass and legume herbage for human consumption has received some consideration, especially as the vitamin content is higher than that of any other available food. Nebuchadnezzar, when he grazed "the tender grass of the field," had "bats in his belfry" at the time, but history records that the diet restored him to sanity, and in addition gave him a crop of hair "like eagles' feathers." There was never a time when the world was more in need of restoration to sanity. Perhaps we all need to be turned out to grass for a while.

Apart from the possible use of grass, Sir John Orr has suggested a type of diet upon which he hopes that it will be possible to maintain the British people in health and condition if the situation gets considerably worse than it is now before the tide turns.

The home produced foods suggested are:

Milk	0.6 pints per head per day
Vegetables	6 oz.
Potatoes	18 oz.
Oatmeal	2 oz.

This would be supplemented by the following minimum of imported foods:

Bread	11.8 oz.
Fats	1.25 oz.
Sugar	2.25 oz.

While not a very attractive diet it is an indication of what must be attempted in case of the gravest possible emergency.

The Ministry of Food, thru advertisements in the press, is attempting to educate the public concerning the proper use and preparation of foods available. It is also pointed out that much can be done to help by avoiding waste. As an illustration of this it is stated that a saving of only ½ oz. of bread per day by each individual would reduce the consumption of wheat by 250 thousand tons or the space occupied by 30 wheat ships.

Food stuffs have been divided into four groups and the people are advised to maintain their health by one kind of food from each group every day.

Group 1 includes cheese, eggs, fish, meat, and milk.

Group 2 contains bacon, ham, bread, butter, margarine, cheese, dried fruit, honey, oatmeal, potatoes, rice, sugar, and similar foods.

Group 3 contains milk, butter or margarine, cheese, eggs, liver, herrings, and canned or fresh salmon.

Group 4 contains potatoes, carrots, fresh or canned fruit, green vegetables, tomatoes, and wholemeal bread.

What of American Agriculture?

Altho conditions in this country at present are vastly different from those which prevail in Great Britain, there are valuable lessons to be learned. The maintenance of public morale during this time of great anxiety is as important now as it will be in the event of a declaration of war. *No time should be lost in placing agriculture on a wartime basis.* The principles involved in the changes made in British agriculture apply almost equally well to the conditions in New York, altho they are desirable not so much because of shortage of food but rather because the transportation services are restricted and may be further restricted. This is because their services are needed for military purposes and for the movement of munitions of war.

In the production of foodstuffs for export, it is important to realize the needs of Great Britain and the restrictions which are made necessary by the limited shipping space available.

Individual Responsibilities

In considering the part that agriculture is playing in this conflict, it is necessary to examine the situation as a whole and to endeavor to find out wherein our generation has failed. Each one of us should feel somewhat ashamed that the generation of which we form a part has made it possible for two major world wars to occur within the lifetime of most of us. We may endeavor to lay the blame upon Hitler, Mussolini, and other national figures, but we, as individuals, cannot entirely escape responsibility in this way. We are all inclined to leave important decisions to others and to give little thought to the problems of government until an emergency arises. A people usually acquires the type of government it deserves. It is up to us, as individuals, to see that we deserve a government that will act intelligently.

Those of us who had the misfortune to go thru the last war in the service came out of it feeling completely disillusioned concerning its glories. The horrors of war made the most vivid impression on our minds, and the conviction grew that warfare was futile and inhuman. We hoped that we had fought in a war which would be the end of all wars, and that the politicians would build up a new world in which the potential causes of future wars would be removed. We felt also that the memory of the horrors of war would make it impossible for anyone to become so completely devoid of morality as to plunge the whole world into another conflict.

It was this deep conviction, which we now realize was unjustified, that paved the way for the events which have taken place. The advance of education may have made us outwardly different, but I am afraid that human nature has undergone little change down the ages. There have always been, and I am afraid there always will be, men who place their own ambitions above humanity. Such men readily find during periods of depression an opportunity to win support for their schemes by trading upon human misery.

The depression, which was the very natural consequence of the last war, affected victor and vanquished alike, but whereas the victor could, to some extent, appreciate that the depression was the direct result of war itself, it was not difficult for the politicians in the vanquished countries to convince their people that their troubles were not due to war but to the loss of the war and to the provisions included in the peace treaty.

Underlying Causes in the Present Conflict

It is upon this background that we should look, therefore, for the primary causes of this conflict. We have the victors of the last war wishfully thinking that peace could be preserved forever by the simple expedient of refusing to fight, while, on the other hand, the vanquished have felt that prosperity could be restored by another war in which they would become the victors.

The present war did not commence in September 1939. It commenced immediately after the last one ceased, in the minds of those who nurtured a spirit of revenge. We have witnessed a new form of scientific warfare involving the deliberate use of the science of psychology. The attempt has been made to weaken the nations of the world from within while carefully preparing the youth of one nation for war. Peace organizations thruout the world, preaching a doctrine of non-resistance have been planted in a fruitful soil and have won ardent support. Because of this, nation after nation has gone down terrified into submission because of lack of preparedness, and each by wishful thinking feeling sure that it, of all nations, was smart enough to avoid involvement.

Hesitancy to risk war, knowing that the people were not in favor of war, has lead to acceptance of situations which in times gone by would have called for firm action. It is a tragedy that those

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Evaluation—Another Reply

Ray Fife, Teacher Education,
Columbus, Ohio

DR. HAMLIN'S reference in his recent article[1] to the origin of the National Committee on Standards has prompted me to reply by way of reviewing the facts concerning the origin and development of the committee and its work.

At the 1938 meeting of the Agricultural Education Section, American Vocational Association, which Dr. Hamlin mentions in this article, a motion was passed unanimously requesting the chief of the Agricultural Education Service, U. S. Office of Education, to appoint a national committee on standards. A few months later, the Western Regional Conference passed a similar motion. The requests were acted upon favorably by the chief of the Agricultural Education Service and the Deputy Commissioner for Vocational Education, and the National Committee was eventually appointed.

The desirability of a national committee for the study of standards had been discussed at earlier meetings of the American Vocational Association, both in the Agricultural Section and in the State Directors' Annual Conference. In various other conferences of school administrators and lay leaders there has been a demand for study of our standards. The authorization of the National Committee on Standards has been presented at regional and national meetings as well as in the columns of *The A. V. A. Journal* and *The Agricultural Education Magazine*.

There has never been any thought that this national committee would set up standards except for purposes of recommendation. No committee can exercise regulatory powers. It *can* recommend. It is the prerogative of Federal, state, or local administrative agencies to adopt standards. It must not be forgotten that we have had national standards since the passage of the Smith-Hughes Act; likewise we have had state standards incorporated into a state plan and standards set up by local boards of education. The system of standards which we have has also "worked pretty well." This does not mean, however, that the standards cannot be improved. Regardless of the inadequacy of the "evaluative criteria," from Dr. Hamlin's viewpoint—due to their similarity to those of the National Committee on Secondary School Standards—our National Committee is securing much fundamental information, basic to a review of our standards. While standards are not "unmixed blessings," yet they do have their place in education. The fact that there is a tendency to "overhaul" them rather than displace them, indicates that they are regarded as having value.

Development of the Evaluative Criteria

Turning to the development of the evaluative criteria, Dr. Hamlin again brings up the question of the relation of evaluation to objectives, and it is here that I differ with Dr. Hamlin on a question of fact. I have a record of the discussions in the St. Louis meeting of the American Vocational Association, and the introduction to the discussion of standards very definitely mentions the interrelation of objectives and standards. I doubt if the leaders in agricultural education who were assembled at the St. Louis meeting were as ignorant of the relationship as Dr. Hamlin suggests. I know that the members of the National Committee on Standards applied themselves to a consideration of objectives in the early stages of their work. It was taken for granted that there was a close relationship between objectives, criteria, and standards.

To me, the fundamental weakness in Dr. Hamlin's position is his insistence upon one of several alternatives of evaluation. Because we have a more accurate professional evaluation, does it necessarily follow that lay evaluation will suffer? Because there is an initial development of criteria for evaluating procedures does it mean that criteria for evaluating results cannot be developed also? Because we have student objectives can we not also have teacher objectives? Because we have national objectives, do state and local objectives become impossible? May it not be true that our Federal standards have made possible the development of real state and local standards for vocational education? Because a plan for evaluation is called "evaluative criteria" and assembled by a national committee does it become dangerous?

Dr. Hamlin makes the statement that I "seem to assume that the committee's plan has no relation to existing procedure." This is not true. The items mentioned in the "evaluative criteria" are built upon the accumulated experience of the supervisors, teacher trainers, and teachers of the United States. Of course, there are limitations to the National Committee's plan, and so long as we are not able to assemble a group of "educational messiahs" on a committee there will probably continue to be limitations.

I am unable to share Dr. Hamlin's fears that national, professional evaluation may be substituted for local, lay evaluation. Simply because the evaluation of 500 departments of vocational agriculture in the United States is co-ordinated thru the work of a national committee and some basic information on the status of the agricultural education program is secured, it will not follow that local, lay evaluation will be interfered with in any way. There may be danger to local institutions in the United States but such danger is not arising from the work of the National Committee on Standards nor from any Federal administrative agency in vocational education. In our opinion the centralization of taxing power which in practically all cases includes national evaluation and control thru "direct action" agencies constitutes the principal danger which may exist.

Outcomes, and Ways and Means

Of course, lay evaluations are concerned with outcomes or results. They should be concerned also with results which are secured thru educative processes. Professional evaluations should be vitally concerned with the educational processes or procedures thru which results are secured, altho they should not take results for granted. I agree with Dr. Ralph W. Tyler when he states that "even when check lists and rating scales of desirable practices are used they should be supplemented periodically by a careful appraisal of the product." I agree with Dr. Tyler, also, when he implies that education, as a whole, has relatively over-emphasized the evaluation of processes and procedures. I am as certain that agricultural education is not guilty of the same error. Until the comparatively recent development of achievement tests, there was almost no measurement of outcomes in general education. There is, however, no statement in the quotation from Dr. Tyler which implies that vocational agriculture or any other form of education will be subject to a disaster if it evaluates the processes and procedures in its program. He does state that such an evaluation needs to be 'supplemented' periodically by a careful appraisal of the product."

Points of Agreement

I agreed with Dr. Hamlin's earlier article[2] insofar as he advocated careful, long-time planning of programs and the development of his *theory* of evaluation into a *plan*. Certainly it would not follow that because I had agreed with the preceding sections of his article I would necessarily agree with his very severe criticism of the "evaluative criteria," as such criteria were issued by the National Committee. Long-time planning can be evaluated in terms of procedures or outcomes, or both.

Dr. Hamlin has very kindly sent me a plan of his proposed study. I do not think that the profession needs to be warned against it. In fact I think we can trust our profession to evaluate any form of evaluation on its merits. With regard to the National Committee's plan, I doubt if there has been any dire need for "arousing." My correspondence with workers in the field of agricultural education in the different states indicates that they have formed their own conclusions, based on their own thinking. So far as standardization is concerned there is no new arrangement into which to rush.

I cannot speak for the remainder of the National Committee on Standards, but I am sure that any recommended changes in standards will be thoroly discussed in regional and national conferences. I am confident also that the National Committee will welcome additional refinements in the techniques of evaluation as well as in other forms of evaluation such as the one Dr. Hamlin is attempting. Following the summarization of the present national study, the National Committee plans a final revision of the evaluative criteria. It is the writer's thought that the final revision should have a wide use in self-evaluation by teachers. Some teachers may wish to have an evaluation by an outside committee following their own self-evaluation. Any plan should be given full opportunity for development before it is condemned. It is in such fashion that progress is made.

1. H. M. Hamlin, "A Rebuttal." *The Agricultural Education Magazine XIV* (Aug. 1941), 27.
2. H. M. Hamlin, "Planning and Evaluating in Agricultural Education." *The Agricultural Education Magazine XIII* (May, 1941), 203-5.

A. M. FIELD

Methods

Teaching Boys to Beautify Farm Homes

M. C. GAAR, Teacher Education,
Morgantown, West Virginia

M. C. Gaar

LIVING is the greatest business of the human family. It has been carried on at a wide variation of levels for a long time. The backwoods, tenant family with its meager income "lives" in its very crude, two-room house with no conveniences, and with little or no effort to make the place attractive. That is, there is no grass in the yard, very few flowers, and little expression of any aesthetic emotion. On the other hand, the family at the other end of the scale has a comfortable home, many conveniences, and a magnified expression of aesthetic emotion. Yet *living* is the chief business in which both families are concerned.

Educators generally agree that living does not mean the same to everyone; that some people are happy with just the meager things of life while others demand that life itself be made manifest on a much higher scale. Yet, as science progresses, and people in the backwoods are brought closer to the more well-to-do group or better "livers," then we as teachers have a very definite problem confronting us. These people want to live to a growing extent like their neighbors live.

If Education Means Living

One of our greatest educators defines education as "living." The desire to want to live on a higher standard certainly motivates the farmer to desire to want to do a better job of farming. An attractive surrounding about the farm home contributes to a wholesome attitude toward farm life. Nearly any farm home can have shade trees, grass in the yard, and shrubs and vines about the place in some orderly manner with but little cost for nursery stock, seed, or other materials.

I used to think that yards were supposed to be as bare as the hand, and that they should be swept clean each week with an old-time, dogwood brush broom. To me that was an unwritten law. I have swept the yards, and in addition, half of the long lane, many a Saturday afternoon. I hoed up every sprig of grass that even attempted to grow. Then I helped to brush the dust off the furniture in the house that came from those bare, dusty yards. I even had to sweep out the dirt that was tracked into the house from those yards. Why did I sweep the yards and hoe up the grass? It was because I didn't know any better. Those same yards have a good, nice sod of grass on them today, and there is a concrete walk leading to the house.

If we can but teach people to improve their home environment and to *live* better, it will be easier to get them to adopt superior farm practices because they will want to do so. Once an individual wants to learn he or she can do so easily and quickly.

Home Beautification in the Course of Study

The course of study in agriculture should include well-defined jobs on home beautification. Under the enterprise "Home Beautification" several suggested, appropriate jobs may be listed for treatment. An attempt has been made to list the jobs in logical order, and they are to be distributed over the training period. Of course, the distribution will depend upon the situation to be encountered in the local area. Since the time of the year to do some of these jobs varies in different parts of the country the seasonal arrangements should be left to the local teacher. Perhaps every boy's farmer-training program should include such appropriate jobs under "Improvement Jobs."

Suggestions on Teaching Procedure

One of the first important steps in getting started on a "Home Beautification" enterprise is to make a survey of the community and especially of the class members, so as to determine its relative importance in their case. The survey is one of the important techniques of our educational program used to determine bases for teaching an enterprise or a unit.

Survey on Home Beautification

a- Name..... Address.....
b- Date..... Distance from school.....
c- Size of farm..... Distance from road.....
d- Topography about the place.....
House: two story.....or one story .....
e- Is house painted.....? Color.....Years since painted..... Material from which house was constructed.....
f- Size of yard....Sq. ft. Level.....Rough ....
g- Shade trees..... Grass on yard..... Shrubs around house..... Flowers..... Vines.....
h- Do you have a lawn mower?.....
i- Do you use whitewash about the place?.....
j- Do you have a rock garden?.....

Boys may be asked to complete surveys, to summarize results, and to draw up conclusions. The class may be taken on field trips to homes in the community that are landscaped. It may be desirable to have a landscape specialist visit the class and assist. Visual aids may be used in motivating the class.

The suggested jobs are:

1. Mapping the home grounds
2. Developing the plan
3. Making and maintaining the lawn
4. Providing plantings of trees, shrubs, flowers, vines, and hedges
5. Growing plant materials
6. Making out-buildings attractive
7. Making a rock garden

To illustrate a procedure in teaching one of the above jobs, I have selected the job of making and maintaining the lawn.

Analysis

1. Size and shape of lawn	1. a- What is the relationship between size of house and the size of the lawn? b- How big should the lawn be? c- What factors are to be considered? d- What should be the shape of your lawn? e- Where should the trees be located in relation to your lawn? f- Where should walks and drives be located in relation to the lawn?
2. Grading and drainage	2. a- Why is good drainage so important for the lawn? b- Which direction should slopes be made? Why? c- Why is it important to develop a smooth surface? d- Under what conditions is it necessary to use tiles? e- If deep grading is necessary how should topsoil be handled?
3. Preparing seed bed	3. a- What is meant by seed bed? b- Why have good soil? c- How develop or secure a good soil? d- Under what conditions would you use fertilizer? e- How use it? f- How and under what conditions would you use manure? What kind? How much?
4. Securing seed	4. a- Who should be consulted before securing seed for lawn? b- Where will you secure seed? c- What kind of seed will you buy? d- How much will you buy? e- When will you buy?
5. Seeding	5. a- What time of the year should the seed be sown? Time of day? Rate? b- What method of sowing should be used? c- How treat seed bed after seed is sown?
6. Caring for lawn	6. a- How keep lawn from washing? b- How care for lawn during dry spells? c- How early should new grass be cut? How high? d- If more plant food nutrients are necessary how should they be applied? When? e- How often to mow? How high? f- Under what conditions should lawn be rolled? How?

It has been said by authorities on landscaping that the lawn is the foundation of the home's landscape. This job might be analyzed and developed by the class under the direction of the teacher according to the following analysis.

Situations Taken From Survey Summary

a. Percent of farm homes that have lawns
b. Condition of these lawns
c. Amount of grade work to be done on the lawns
d. Number of homes having lawn mowers
e. Appreciation of home folk toward having good lawns
f. Grass needs to be better cared for
g. Lawns are too big or too small for size of house, and to be practical
h. Lawns need to be reconditioned

Objectives

a. To develop lawns for those members in class who do not have them
b. To recondition those lawns that need it
c. To assist boys to secure or repair lawn mowers where necessary
d. To destroy weeds in lawns
e. To have each class member include the necessary job in his supervised practice program

Plan for Doing the Job

1. There is a balance between the size of the house and the size of the lawn. Make the lawn large enough to give an effective approach to the home, but not large enough to make the work of upkeep burdensome.

(Continued on page 78)

An Exchange in the Paradise of the Pacific

D. E. WOMER, Exchange Teacher,
McKinley High School, Honolulu, T. H.*

THE Island of Oahu, Territory of Hawaii, highly advertised by its staunch friends as the Paradise of the Pacific, is truly a beautiful tropical spot. It is a perpetual seashore and mountain summer resort in the setting of sugar cane and pineapple plantations edged by an array of colorful blossoms, coconut palms, and numerous tropical fruits.

D. E. Womer

Honolulu, its only city, has grown very rapidly during the past few years in order to accommodate the visitors who come in increasing numbers each succeeding year, and to meet the needs of the national defense units stationed here.

Excepting the highly organized sugar cane and pineapple industries, the agricultural resources of the islands are yet to be developed. A few independent farmers produce milk, poultry products, and tropical vegetables and fruits, but thousands of acres of arable land produce only a wild, sub-tropical jungle growth.

The mainland instructor of agriculture on exchange in Hawaii has an unusual experience in adaptation. Boys of Oriental parentage (chiefly Japanese) attend classes in vocational agriculture where textbooks and reference material deal mostly with mainland agriculture. The instructor must reorganize instructional material to fit the local setting. Land valued at a thousand dollars per acre and upward cannot economically be used for poultry range, hog pasture, or even for growing crops to provide feed for livestock.

Supervised Practice Facilities

Since high-school pupils have very limited home facilities for project work, most of the high schools in Hawaii which offer vocational agriculture provide for a practice program at the school. Enterprises in vegetable production, tropical fruits, floriculture, and poultry production are commonly developed on ground provided by the school. At McKinley High School we have a three-acre vegetable garden, a small poultry enterprise, a flower garden, a tropical fruit garden, and an apiary. The flower garden and apiary, however, are operated as parts of non-vocational courses in agriculture rather than as parts of the vocational program.

McKinley serves a student body of four thousand young Americans of Oriental parentage, chiefly. We have 50 boys enrolled in vocational agriculture, organized in three sections. Two vocational teachers and a non-vocational teacher co-operate in the use of the school equipment.

During the preparation for the ceremony of initiation of the Green Hand Future Farmers, the boys raised such questions as "What is a hay rope?" "What is hay?" Upon the occasion of a field class in dairy cattle at the University farm the boys asked for a demonstration of—"How you get da milk?" The boys were overjoyed at the opportunity to teach the instructor all the intricacies of making the *lau lau* and preparing the *imu* (an oven pit in the ground for roasting the pig) in which the ancient Polynesian feast is prepared.

The intensive cultural practices of Eastern Asia are used by Japanese families on small plots of land leased without improvements from large landholding estates at rentals averaging $80 per acre per year. Only the high prices paid for produce make it possible for the frugal family to eke out a living at independent farming on these islands.

Citizenship Training Evident

The public schools of Hawaii are accomplishing a wonderful work of Americanization among a polyglot population of Polynesian, Portuguese, and Oriental youth. Oriental customs modified by American introductions with pidgin dialect, however, will probably persist in this semi-tropical melting pot. Evidence of Americanization can be observed in several forms upon casual contact with the younger generation. A very common sight is a four-year-old Japanese youngster, dressed in a cowboy suit astride a galloping broomstick, with a toy pistol pointing heavenward. "Hi Ho Silver!" is his battle cry. Recently upon a stroll thru an Oriental section of the city I observed four little Japanses girls of kindergarten age. The largest of the group was diligently leading the other three, all singing—"God Bless America" at the top of their voices.

A class in vocational agriculture on a field trip to an orchard to study papaya production on the island of Oahu

The study of life in an unaccustomed setting is in itself a broadening influence which may be of great value to a teacher. Then, too, the adventure of self-adjustment in a strange professional environment strengthens one's confidence in his ability to avoid the rut of self complacency. A year of exchange service, altho rather expensive, becomes a valuable professional asset, as well as a fund of enriching experiences secured only once, but enjoyed for a lifetime.

*Each year the Territory of Hawaii exchanges a certain number of public school teachers with mainland schools. Mr. Womer, formerly teacher of agriculture at Hepburnville, Pennsylvania, is one of the first teachers of agriculture to participate in such an exchange. The exchange was arranged by Doctor C. S. Anderson of the Pennsylvania State College, who recently spent a sabbatical leave at the University of Hawaii. Mr. Womer's exchange was for one year.

Supervised Practice

H. H. GIBSON

Supervised Practice in Productive Enterprises as a Basis of Instruction for Young-Farmer Classes

R. W. CANADA, Supervising Teacher in Agriculture, Crete, Nebraska

R. W. Canada

MOST teachers of vocational agriculture will agree that their work does not end when high-school boys interested in farming have completed all the courses in vocational agriculture which the school offers. They are coming to realize that the ultimate objective should be the establishment of such boys and other interested farm youth of the community in farming programs.

However, there is some difference of opinion as to where the emphasis on teaching material should be placed for the younger-farmer group. Some teachers are of the opinion that such subjects as etiquette, taxation, tractor care, insurance, and problems pertaining to farm financing and farm planning are some of the more desirable types of topics to present to young farmers on conference meeting nights. Others have been of the opinion that the emphasis should be placed on getting these young men started on productive enterprises and on seeing these projects thru to a successful conclusion, using the problems arising in follow-up work and supervised practice as the best means of giving needed instruction. Other supplementary, or related topics involving the broader development of their farming programs as a whole will come, then, as an outgrowth of discussion and instruction pertaining to supervised practice in productive enterprises.

A young farmer without money, credit, or chattel is not interested in learning whether he should precede or follow his best girl into the movies when he hasn't a dime in his pocket with which to take her. If he has no money on hand or credit established with which to buy a used tractor or to keep up his insurance policy, he may not be too interested in a presentation of these subjects on meeting nights. However, the instructor who can help a young man to develop a program that will give promise of increasing both the young man's knowledge and his net worth will have no difficulty in securing interest.

Young Farmers' Poultry Association Formed

It was with these convictions and observations in mind that the writer decided to organize a Young Farmers' Association in Poultry Flock Improvement in August, 1940. In this community poultry, if well managed, has proved to be one of the safest and quickest means for a young farmer to begin to accumulate some working capital.

Before school was out, all students in the high-school assembly made up a list of young farmers in their respective communities between the ages of 16 and 24. During the summer these young men were visited, and plans for the course were outlined. Outcomes of various successful poultry projects during the past three years and future possibilities of the poultry enterprise were pointed out. Several FFA members aided in this work.

During the latter part of August all the boys who were interested were called in to an organization meeting. Twenty-seven boys from the original list of 45 were enrolled. The Crete Young Farmers' Association was organized and officers were elected. Four squad members were appointed by the president to promote attendance and to aid in organization of transportation to meetings from the four main areas from which the young farmers were coming. It was decided that an occasional recreational period after meetings would be held.

A program was outlined by which the young farmers were (1) to start baby chicks for broiler and fryer production as near January 1 as possible, (2) to clean and disinfect houses and start baby chicks for laying flocks March 15 to April 1, and (3) to clean houses and start turkeys May 20 to June 1. As a result, over 9,000 baby chicks were started before March 1. By April 1, broilers and fryers were being marketed from 18½ to 22 cents a pound, live weight, and up to 35 cents a pound, fully dressed and drawn. High-quality baby chicks for laying flocks have been started on a number of farms and the results from these laying flocks, if well managed, will become a highly satisfactory experience for the young farmers.

Instructional Problems Found in Farming Programs

The problems growing out of supervised practice in poultry and other farm enterprises form the nucleus of instruction and result in a wide range of information asked for and needed by this group. For instance, starting baby chicks required more poultry housing and equipment, hence a careful study was made of housing and equipment, remodeling, and the cost of poultry-house construction.

After this, five meetings were held in the farm shop, during which time poultry equipment and appliances such as feeders, automatic waterers, and light reflectors were built and repaired. A number of poultry houses were remodeled and interior arrangements changed. Three new poultry houses were built from cheap construction materials, making use of wallboard painted with waterproof asphalt roofing paint. Also, one house was built with laminated rafter construction with low-cost lumber.

In order to carry on poultry production work and not compete with parents for available poultry space, a number of the young farmers adapted some old building on the farm such as an old washhouse, smokehouse, or a machine shed. The idea has been to do a good job at costs that would leave some room for profits. Credit needs were studied and

A flock of White Leghorn chicks being grown out for winter laying by Joe Lorenz, in a new, well-equipped house in which broilers had been produced before the chicks came

arranged for locally. Baby chicks were ordered co-operatively. The largest number ordered at one time was 6,000.

White Rocks have been regarded as the best variety of chicken for broiler production. A new type is now proving to be better—a crossbred broiler resulting from mating White Leghorn hens with dark Cornish cockerels. The dark Cornish gives size and thick fleshing. The White Leghorn contributes fast growth, quick, complete feathering, and high livability. This will be the basis of breeding for next season's broiler and fryer production.

In addition to starting productive enterprises in poultry, 107 head of breeding ewes and three purebred rams were bought and placed on the farms of five of the young farmers as a part of the start toward establishment in farming. Some sows, as well as feeder pigs, were bought. Crossbreeding of swine was carried out by several members. Pure seed wheat will be secured and planted in co-operation with the Nebraska Grain Improvement Association.

All of these various productive enterprises based on a definite program for supervised practice involved live topics for discussion and are resulting in the study and building up of better planned farming programs.

Typical Programs

The following are a few examples of young farmers now engaged in poultry production enterprises:

One young farmer is Joe Lorenz, who began to farm for himself three years ago. He produced 470 broilers, getting the baby chicks on January 9. All but 50 are gone now*. They weighed about three pounds and brought an average of 20 cents a pound. "Broilers paid a good return this year," Lorenz said. His broiler chicks were White Rocks. On March 6, when they were out of the brooders, he bought 1,100 White Leghorn chicks, out of which he expects to pick 400 cracking good layers for this winter. Lorenz has built a new poultry house, an arched, laminated-rafter building 20 feet deep and 24 feet across the front. It serves excellently as a brooder house now, and this winter it will become a laying house for 200 hens. Total cost of the new building was about $125. Joe Lorenz considers it a very good investment. Mrs. Lorenz, incidentally, has an answer to the question of how early White Leghorn pullets lay. The first egg was laid last year, she said, just four months and four days after the chicks arrived.

Lumir Kubicek, who finished high school two years ago, has sold all but the last few of 2,000 broilers. He has in the brooder house 700 White Leghorn chicks, out of which he hopes to get 300 good layers. These, with 100 hens he's keeping over for a second year, will make a laying flock of 400. This young farmer also has 220 turkey hens, about half Bronze and half Bourbon Reds. They are laying now, and his turkey poults will go into the brooders after the second batch of chickens has moved out. After they come out of the brooders, the turkeys and chickens will never tread the same ground. Young Kubicek summers the turkeys a quarter of a mile from the house where they are on clean ground.

Arthur Aksamit, a first-timer in the business this year, had good luck with 1,400 early broilers, has 650 birds on hand now (the cockerels nearly ready to go as broilers and the pullets to be kept) and 1,500 more chicks to come. On a rented farm, he's building a chicken house of his own. It is 20 feet deep and 48 feet long, made of tarred wallboard and painted with Rubberoid roofing paint, both inside and out. It is built in four-foot sections and, if necessary can be taken down and moved. Aksamit said the whole cost of the building will be $180, and the coming winter it will house 400 laying hens.

Ervin Spinar got White Leghorns early for his winter laying flock. The chicks are already well along, doing their feeding and drinking now in the pen outside of the brooder house. Spinar hopes to have 300 layers this winter. His father keeps about 350 hens in the main chicken house so young Spinar has fixed up an old machine shed for his brooder house.

The Meinke brothers—Gerald, Clarence, and Kenneth—have fixed up their own brooder house, too, by working over an old washhouse. The whole fix-up job required a cash cost of only $3.09 and it has served very satisfactorily. Their 550 White Rock chicks are now five weeks old, with practically no loss. They will soon separate the cockerels to fatten for broilers, and will keep the pullets on growing mash to mature into early layers. The boys will remodel one or two idle sheds around the place for winter laying quarters.

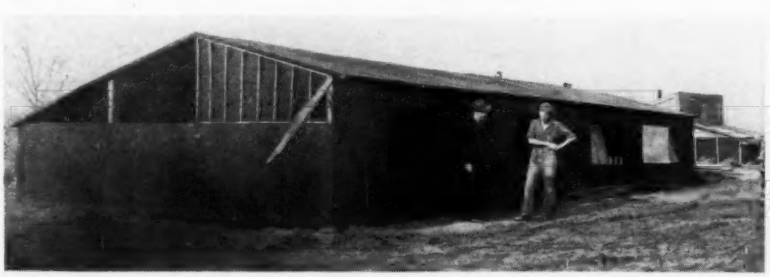
CALL FOR ARTICLES

Beginning with an early issue we hope to run a series of articles dealing with supervised practice in the area of farm shop or farm mechanics. This is a matter that is especially timely. In the present emergency a great deal of emphasis is rightfully being placed on activities involving buildings, servicing machinery, and equipment. This section will welcome articles from teachers and others who have had experience with supervised practice in this area. All articles should be sent directly to H. H. Gibson, Corvallis, Oregon.

Another young poultryman is Ben Boden, whose successful experience with broilers last year was the send-off that resulted in the members of the Crete Young Farmers' Association marketing 12,000 this year.

Because Crete is particularly well situated, near Lincoln and Omaha, a ready and expanding market for the broilers is being developed. It is the present plan of this group of young farmers to increase production to between 20 and 25 thousand birds this fall and winter, and to establish a medium-sized, broiler-production area in the eastern half of Nebraska.

*Mr. Canada submitted this article about May 1 and reported conditions and progress as for this date. H.H.G.



Mr. Canada and Arthur Aksamit in front of Arthur's newly completed, 20' x 48' movable poultry house, which will shelter 400 White Leghorn layers

Book Review

Forestry in Farm Management, by Westveld and Peck, 339 pp. illustrated, published by John Wiley and Sons, Inc., price $3.

This book is designed to meet the needs of students of agriculture and farmers for a practical book on farm forestry. That this has been accomplished to a high degree is shown by the treatment of many jobs such as establishing new farm forests, improving and perpetuating existing farm forests, growing forest-tree crops, appraising timber values, contracting for sale of timber, protecting woodlands, and organizing for co-operative marketing of farm forest products. This book, more than any other outside of technical silviculture books, indicates what the farmer should do with his farm forest and how he should do it to make the farm as a whole more profitable.

As compared to other publications on farm forestry, the authors have wisely used the farm management approach rather than the forestry approach in much of the book. Farm forestry is largely a management matter, since woodlands require little attention other than protection from fire and overgrazing by livestock, and need to be properly harvested. Farm forests require long-range planning but little or no rush work as does a ripened small grain or fruit crop.

The place of forest crops is shown in a wide variety of farming types from the southern farm, where the forest crops may be among the main sources of cash income, to the plains farm where the trees yield no direct cash, but still are an essential of a well-managed farm. The southern farmer will find this book particularly applicable to his farm forest problems. One wishes, however, that the authors had devoted more space to the problems of the woodland pasture and woodlots of the cornbelt, and to shelter belts and shelter strips of the prairie-plains area, where many farmers still do not think of forests as a farm crop.

The book is profusely illustrated with pictures and drawings. Many tables add to the usefulness of the book in planning farm forests and in figuring timber yields and values. Many forest management and skills jobs presented in this book may readily be adapted by teachers of vocational agriculture as practical activities for supervised farming programs on any level.—W. P. Beard, Washington, D. C.

Studies and Investigations

C. S. ANDERSON

Measuring Efficiency in Conducting Farm-Practice Programs

R. O. ROBINSON, Teacher, Reynolds, Illinois

SINCE supervised farm practice is the heart of the entire program of vocational agriculture it is important that a high degree of participation be maintained in all phases of the program. The phases of supervised farm practice may be listed as follows: securing preliminary arrangements; general planning; providing for instruction; developing plans for all-important jobs in each boy's project; record keeping; supervising the project work; and determining results.

R. O. Robinson

Source of Data

The data for this study—showing the effectiveness in conducting each phase of the supervised farm practice work—were obtained from questionnaires on which the teachers checked pertinent activities according to the degree of participation. These checks were made under four categories "Always," "Quite generally," "Rarely," and "Not at all."

The data were subjected to statistical treatment to determine whether a sample of 22 teachers in a given locality would justify conclusions as to the effectiveness of the program in that locality, and also serve to point out the strengths and weaknesses of the program as conducted over a wider area.

The purpose underlying the statistical analysis was to determine which characteristics of the programs in the 22 schools studied might be regarded as inherent in the supervised farm practice programs found generally elsewhere.

A cursory examination of the data might indicate a tentative conclusion regarding which phases are being more effectively conducted by the 22 teachers participating in the study, but we are interested in discovering if differences are sufficiently wide to indicate more general conclusions.

To effect an answer to this question, a hypothesis of "no difference," in the efficiency of the conduct of the seven phases was constructed and subjected to the chi-square test to determine if it may be rejected.

Statistical Treatment

In Table 1, the symbol "O" represents the observed number of responses to the questions of a certain phase of the program which fall into a given category, or in other words, an observed frequency of responses. The symbol "T" denotes theoretical frequencies, or the number of responses to the questions of the same phase of the program which might be expected to fall in the given category. "T" is computed on the basis of the theory of probability. An example of one will make the remaining calculations obvious. "T" for phase I in the "Always" category is equal to the product of 176 and 322 divided by 814, which is 69.7. All other theoretical responses are calculated in like manner.

The critical value of chi-square depends on degrees of freedom, or the number of equations that are required to express the discrepancy, in this case 18. Thus, chi-square, $X^2.05=28.869$. The calculated value of chi-square, $X^2=157$, is certainly too great to be due to luck or chance. Hence, the hypothesis that all phases of the supervised farming program are being conducted with equal efficiency must be rejected. The test showed, instead of equal effectiveness when each phase was compared with each other phase, wide differences in most cases. These differences are believed to be not merely incident to the teachers and schools incorporated in the study, but also characteristic of the program quite generally.

The question which naturally arises is: which phases of the program are being conducted with greater effectiveness, and what are the relative strengths and weaknesses of the several phases? Answers to these questions were obtained by making simple, comparative statistical analyses of each phase with each other phase.

The results of these comparisons are summarized in Table 2.

Table 1.—A STATISTICAL, COMPARATIVE ANALYSIS OF SEVEN PHASES OF THE SUPERVISED FARM PRACTICE PROGRAM

Phases	Always		Quite Generally		Rarely		Not at all		Phase Totals
	O*	T#	O	T	O	T	O	T	
I	41	69.7	85	83.4	28	16.9	22	6.1	176
II	50	52.2	68	62.6	14	12.7	0	4.5	132
III	60	43.5	44	52.2	5	10.5	1	3.8	110
IV	37	34.8	41	41.7	10	8.4	0	3.0	88
V	63	34.8	17	41.7	7	8.4	1	3.0	88
VI	45	43.5	49	52.2	12	10.5	4	3.8	110
VII	26	43.5	82	52.2	2	10.5	0	3.8	110
Response Totals	322		386		78		28		814

*Observed response frequencies
#Theoretical responses expected (calculated)

Table 2.—THE CHI-SQUARES OF PHASE WITH PHASE COMPARISON

Phase Comparison	$X^2=\frac{(O-T)^2}{T}$
I and II	23.6*
III	28.8*
IV	20.3*
V	60.2*
VI	15.6*
VII	34.8*
II and III	9.1*
IV	0.5
V	18.6*
VI	5.7
VII	15.9*
III and IV	5.7
V	10.0*
VI	4.0
VII	27.0*
IV and V	18.4*
VI	3.3
VII	18.8*
V and VI	19.5*
VII	60.2*
VI and VII	24.6*

*Significant—critical value $X^2.05=7.815$

In these simple, comparative analyses the degree of freedom is three and the critical value of chi-square is $X^2.05=7.815$. Those discrepancies greater than critical value are judged to be statistically significant while those equal to or less than critical value are not significant, since they could be due to luck or chance. These differences are indications

of strengths or weaknesses in the conducting of the program, as one phase is compared with another. However, these analyses do not permit conclusions as to which differences indicate strength of conducting the program or which differences indicate weaknesses. To determine which existed, strength or weakness, and also the causes of strength or weakness it is necessary to consult responses as indicated by the 22 teachers in the study.

Summary

As these responses are not included in this article in any detail the following summary is limited to the efficiency of conducting supervised farm practice work.

1. "Making the preliminary arrangements for supervised farm practice" is being conducted with the least efficiency of all the seven phases studied.
2. The inefficiency of conducting the "preliminary arrangements" is reflected thruout the entire program.
3. "General planning" is being more efficiently conducted than "preliminary arrangements."
4. "Provisions for instruction" are being more efficiently administered than "job planning."
5. Neglect of "making the teaching timely" is the most serious fault in the "provisions-for-instruction" phase.
6. "Job planning" is not being conducted very well by most of the teachers in the area of this study.
7. "Record keeping" is being the most efficiently conducted of all the seven phases studied.
8. "Supervision" of the project work is inadequately handled.
9. Lack of efficiency in "supervision" is due to lack of purpose for project visits made.
10. Less than half the teachers stated that they visited the boys' projects at all critical periods.
11. There is a lack of records of project visits, and of relating of the project record book to the project.
12. The practice of having students analyze the records of their completed projects is frequently lacking.
13. Students have infrequently determined how to improve their projects.
14. Only two teachers reported that the capital and income from the project work is "always" retained by the student.
15. There is no noticeable tendency for the project work to become larger and better each year.
16. The phase, "results," has suffered from the inefficiency of the other six phases.
17. In the whole supervised farming program there were only 300 observed responses in the "always" category out of a total of 814 responses made.

Suggestions for Improvement

Some suggestions which seem pertinent for the improvement of the efficiency of the supervised farm practice program in vocational agriculture follow. These ideas are drawn in part from the summary of this study and in part from the experience and philosophy of the writer:

1. Thoroness should be exercised in preliminary plans before the student starts to school.
2. More use should be made of the written agreement between parent, student, and teacher.
3. The boy's ownership or desirable partnership relation should be established.
4. Long-time, supervised farming programs should be made as a result of previous, carefully studied, preliminary arrangements.
5. The supervised farming program should be made more like that in which the student expects to engage as a farmer.
6. The instruction should be given at such a time as to provide the greatest assistance to the student in carrying out his supervised farm projects.
7. Instructions should be given in, and students should make job plans for, each project job in their supervised farming program.
8. Students should make written statements of what they intend to do about each job plan.
9. The students' projects should be visited at all critical times.
10. The teacher should have a definite purpose for each project visit.
11. The students should analyze their completed project record books and determine how to improve their projects.
12. Arrangements should be made whereby the student may retain the capital and income from his supervised farm practice work.

These recommendations are necessarily of a general nature and will not apply equally to all teachers of vocational agriculture or to all departments of vocational agriculture. They will not insure 100 percent efficiency, if followed, but it is felt that improvement according to the above recommendations will increase the efficiency of the supervised farm practice program in the area of this study and perhaps in a larger area also.

All of the evidence assembled pertaining to the efficiency of the supervised farm practice program indicates that there is much need for improving the effectiveness of the participation in the activities of the program.

The National Evaluation Project

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AT THE request of the editor, I would like to sketch very briefly the progress of the National Evaluation of Vocational Education in Agriculture by indicating what steps have been taken and what steps remain to be taken.

Evaluation committees have been at work in all except three states. Approximately 400 evaluations have been made and, inasmuch as it takes two days to make an evaluation and the typical committee has three members, my estimate is that 2400 man days have been spent in evaluating. If the program of national defense had not interfered, 100 additional evaluations would have been made.

The next step is to check over the evaluation reports, to treat them statistically, and to present a summary and analysis in the general report on the project.

Last May, a Technical Committee consisting of George P. Deyoe, Chairman, Henry Brunner, and John T. Wheeler, met in Washington. This committee gave advice with regard to statistical matters, and tentatively outlined the forthcoming report.

The most interesting phase of the project relates to the activities and attitudes of supervisors, teacher-educators, and teachers of agriculture. Most of these persons are not interested in the original purpose, i. e. to furnish a basis for the revision of standards, as much as they are in the possibilities of upgrading state and local programs of vocational education in agriculture.

I can illustrate this interest in upgrading programs by a description of what some of the states are doing and have done.

In 1940 evaluations of local programs were made a part of summer sessions in the teacher-educating institutions of the following states: Georgia, Illinois, Iowa, Louisiana, Michigan, Minnesota, Ohio, Pennsylvania, and Virginia. Not only were evaluation committees trained by this means but other supervisors, teacher-educators, and teachers were made familiar with the use of the Evaluative Criteria.

Evaluations of parts of programs, for example, the organization of the evening school, the course of study in the evening school, course of study in the part-time school, supervised practice programs, have been made before groups of teachers at state conferences and summer-session classes. A teacher, an all-day student, a member of an evening class, or a part-time class has been questioned by an evaluator before the group and an evaluation made of a real situation. This procedure serves as an effective teaching device and at the same time demonstrates how evaluations are made.

In several states plans have been made to extend the evaluation to more schools than were included in the original ten-percent sampling. Pennsylvania has been especially active. In several counties all departments have been evaluated. Additional evaluations will be made in Wisconsin during the next year. The National Defense activities are competing with such evaluation activities.

In some states summaries and analyses of evaluations within the state are being made. Some of these states are Georgia, Michigan, Pennsylvania, and New York. The New York study was used as a basis of the state teachers' conference and of some summer-session courses.

Recently I heard three reports by committees of teachers on the reorganization and adjustment of the Evaluative Criteria for use as an instrument for self evaluation by teachers. Excellent suggested changes were given. This urge on the part of teachers to analyze and improve local programs is, in a sense, a by-product of the evaluation project. There are many who feel that the by-product is more important and significant than the main product.

The life of the husbandman—a life fed by the bounty of earth and sweetened by the airs of heaven.—Jerrold.

Future Farmers of America

L. R. HUMPHERYS

Procedures in Selecting and Training FFA Officers

D. B. ROBINSON, Adviser, Kenton, Ohio

D. B. Robinson

BOYS in general like to do things, assume responsibility, and accept opportunity. The degree to which boys are given these possibilities in an organization depends upon how well they are included in its program of activities and how well its leaders are trained to carry out this program. The FFA should serve as a training school for such development.

In the Kenton, Ohio FFA we have a plan which gives the boys who prepare themselves an opportunity to serve and to demonstrate abilities they have acquired. The by-laws of our organization call for the election of a president, vice president, secretary, treasurer, and reporter each year. This election takes place in April. These newly-elected officers work out a yearly program of work and submit it to the chapter for approval in June before they are installed and take over their duties on July 1. This group of officers makes up the executive committee of the organization. All of these boys are juniors and seniors. As a part of their English course they take public speaking during their junior and senior years to give them better training in expressing themselves acceptably.

Some Offices Filled by Appointment

Our plan of training officers also encourages boys who show possibilities of growth and development in the qualities of leadership. The by-laws of the organization recognize this point by creating other offices to be filled by appointment. These officers are appointed each year by the executive committee and the adviser. They include the student adviser whose duties are to make arrangements for all meetings and to introduce and accommodate all visitors; the librarian who is responsible for the distribution and management of over 300 reference books, 1000 reference bulletins and other equipment during the year; and the scrapbook editor, who organizes and assembles the chapter scrapbook each year. These three appointive offices are usually filled by senior boys who have made progress in leadership qualities but who were not elected by the chapter to occupy elective offices.

Our plan of officer training further provides for the appointment of two assistant secretaries. Good junior and sophomore boys are selected for these positions. Their duties are to assist the secretary in filling out all the reports sent into the state department by the chapter during the year. They also get some experience in keeping a record of the minutes of meetings and activities of the chapter.

Assistant Officers Are Understudies

Assistant treasurers are also selected, one a junior and one a sophomore. These boys assist the elected treasurer in collecting the dues and bank deposits from each member and in recording the same in the treasurer's book. The junior representative has the responsibility of the Agriculture II class, or junior and senior section, while the sophomore collects from the Agriculture I class, or freshman and sophomore section.

Kenton, Ohio, FFA Officers, 1940-41. Left to right: Ray Holland, Treasurer; Willard Holland, Student Adviser; Charles Wolfe, President; Bobby Hommel, Vice President; John McCullough, Secretary; Sidney Wuethrich, Reporter

The assistant reporters are selected in a similar manner by using a junior and a sophomore. These boys assist the regular chapter reporter in preparing news articles for the *Ohio Future Farmer News*, the local school paper, and the local newspapers.

Assistant librarians are also selected to help out in each division of classes with the distribution and collection of reference material as well as to keep an orderly library.

Scrapbook editors from the junior and the sophomore classes are also appointed. They assist the scrapbook editor in gathering material from the members and in placing it in the yearly chapter scrapbook.

An officer-training school is held once each year in our district. All of our officers participate in this school. Here they exchange ideas and take part in a round-table discussion of FFA problems and plans. From this type of activity they not only receive help, but also give aid on problems met by other FFA chapters.

How Officers Are Nominated

To the reader this may seem rather an elaborate scheme of officer training involving a large number of boys. That will probably be true in a chapter with a small enrollment. In Kenton we have 50 boys in our FFA chapter, which is all of the boys enrolled in vocational agriculture. This plan has been evolved to give as many boys as possible an opportunity for participation. It increases interest by giving more boys an active part in the activities of the chapter. Responsibility is divided, thereby reaching more of the members. Individual efficiency is increased because boys grow into a responsible office. It also helps to get each boy in the place in which he wants to work in helping carry out the year's program of activities.

This plan worked very well in our chapter this spring. We have elected our new officers for the 1941–42 year. They have prepared their program of work and are ready to be installed in June and assume their new duties July 1.

Each boy in the chapter has an opportunity to nominate some member for each elective office. This is done by using the following plan:

Nomination Blank for FFA Officers

My word picture of an ideal officer is one who is erect in posture, neat and tidy in appearance, possesses a strong and clear voice, a calm and steady eye, is not too hasty in conducting business matters, has mastery over situations, possesses good judgment, is fair and tactful to all, and, above all, believes in his organization.*

I wish to nominate for *president* of the FFA a boy who understands parliamentary procedure, can occupy a position without getting bossy, has a good

voice and good poise, thinks clearly and quickly, plans carefully before he speaks, is prompt in accepting responsibility, regular in attendance, and loyal to the FFA.

I wish to nominate for *secretary* of the FFA a boy who is neat in writing, understands composition of sentences, is regular and prompt in getting things done, is courteous to all, willing to assume responsibility, and is loyal to the FFA.

I wish to nominate for *treasurer* of the FFA a boy who can be trusted, keeps accurate and complete records, is regular and prompt in completing assignments, and loyal to the FFA.

I wish to nominate for *reporter* of the FFA a boy who knows news, likes to write news, can select words and sentences to best express ideas, is dependable in getting work done on time, and is loyal to the FFA.

These boys, I believe, can wisely lead our FFA for another year. I believe they will be respected by the members of the FFA and the student body in the high school. I also think that they will represent our chapter in the community and over the state in a creditable manner.

Each member has the privilege of filling out one of these nomination sheets.

When the nominations for president were made for this year's officers they were divided among three boys. Since one boy received the nomination only once he was eliminated and there were two boys to be elected and made president and vice president. The one receiving the most votes was to be president and the other vice president. These were the two best qualified boys in the chapter.

The nominations for secretary gave last year's assistant secretary over two-thirds of the entire votes, so he was easily elected secretary.

The treasurer and the reporter were nominated and elected in a similar manner. In short, the assistant secretary, treasurer, and reporter were all advanced into the regular chapter office.

Boys' Own Interests Considered

Our elective officers are all seniors, except the reporter who is a junior. We had five other senior boys who were not elected into office. The remainder of the boys in the chapter were asked to put in writing the office they would like to work in as an assistant. The executive committee and adviser then met and selected from this list of volunteers those whom the committee felt possessed the proper interest and qualities necessary to be given an opportunity for advancement.

In making this selection we were careful that those boys who showed possibilities of being elected president and vice president next year were not made assistant secretary, treasurer, and reporter. They were used in some of the other positions. If this were not given consideration, a boy who had trained himself to be treasurer might be advanced into president and an untrained individual be elected treasurer, thus destroying the purpose of the system.

Our staff of elective and appointive officers for next year numbers 18 and our approximate enrollment in the chapter will be 50.

Many of our officers after graduation become officers in farmers' institutes, granges, and rural-youth gatherings. Thus, the Future Farmers of America serves as a training school for future rural leaders.

*Wilbur F. Stewart, *Helps in Mastering Parliamentary Procedure:* New Concord, Ohio: The Enterprise Co-operative Company.

Be the labor great or small, do it well or not at all.

FFA Leadership Training in the Curriculum

L. R. HUMPHERYS, Teacher Education, Logan, Utah

IS A TEACHER of vocational agriculture justified in using school time for activities in FFA leadership training? This is a question which is persistently asked not only by school teachers and administrators but also by patrons and lay members of the typical rural community. Before this question is answered satisfactorily another question must be answered: Is the Future Farmers of America a legitimate and desirable part of vocational agriculture? Much can be said concerning both of these questions.

L. R. Humpherys

If the farmer of today is to be successful in the occupation of farming, he must participate wholeheartedly in worthy co-operative effort. This statement is particularly true in America where we subscribe to the democratic way of life. In this respect agriculture is no different from any other occupation. Farmers must organize to establish their identity and promote their individual and group interests. Farm organization procedures and leadership training, then, become an important part of any farmer-training program for both youth and adults. Interpreted in terms of all-day instruction, a provision should be made in the curriculum and the extra-curriculum for the activities of farm organizations. Anything short of this provision in a training program is inadequate. This need for practice in farm organization among boys was one factor that prompted the organization of the Future Farmers of America.

As a teacher of vocational agriculture in a local high school I would take the position with the school administrator that in order to teach organization, leadership, and co-operation, the farm boys must have some medium by which they can practice these skills. For the farm boy in high school the Future Farmers of America serves as a logical device for training in leadership and co-operation. The activities of the Future Farmers of America are such that they can be justified in both the curriculum and the extra-curriculum. Therefore, it is right and proper that school time should be used to promote the worthy objectives of this organization. In this connection it might be said that using school time for such activities as are characteristic of the Future Farmers of America is in keeping with the thinking of many of our progressive leaders in education today.

FFA Training for Adviser

If the above proposition is true the teacher of agriculture should have both training and experience in Future Farmer activities as a prerequisite to teaching vocational agriculture. In fact, the curriculum of teacher education in vocational agriculture should include appropriate Future Farmer activities. Furthermore, a qualified agricultural teacher should give efficient instruction and assume active leadership in Future Farmer activities. He should be a thoro student of FFA and be able to direct a program of participating experiences. Any teacher short of these qualifications should feel a responsibility for professional improvement in this field of service. The old axiom can be made to apply in this phase of agricultural instruction. "As with the adviser so with the chapter."

One of the basic principles in the organization of the Future Farmers of America is that leadership shall come from its members. The need for this leadership is apparent when the time arrives for the chapter officers to be elected to assume their duties, and to start the ball rolling for the year's work ahead. Our concern is to adopt leadership training procedures which will get the local chapter going on its own power.

The most economical practice in training officers and building a chapter program is to have a good library on FFA activities and to stimulate reading and use of helps. I am depressed at the scarcity of FFA reference material in the average agricultural library. A very satisfactory library can be had for a small amount of money. The most important book is the last edition of the FFA manual. Every boy should be familiar with this "handbook" and it should be used as the basis for leadership training.

Building the Program of Activities

Effective leadership training will be made manifest in the FFA program of activities. Please notice that I use the term, "program of activities," instead of "program of work." I prefer to use the term "activities" rather than the term "work." It seems to be more sound, psychologically.

Human progress the world over depends primarily on careful planning and the execution of the plans. Whether it is in the building of a dam, the construction of a battleship, or fighting a war, this fundamental principle holds true. Plans must be evolved. They do not develop overnight. A few fundamental principles should be recognized in building a program of activities. Natural divisions or major areas should be selected in which the Future Farmers expect to devote their efforts. These areas are determined for the most part by the objectives of the organization. A relative emphasis should then be given to the selected areas in order that proper weight may be assigned to the items that go into the program. The eight major divisions used in the national FFA score card are weighted. Points are given for each division of the *program* and for the *accomplishments* in the ratio of one to three. This rating is arbitrary and has no special significance except to assist in securing balance in the program and emphasis in planning and carrying out the plan.

In order to set up the annual program it is necessary to keep in mind specifically what is to be done, how it is to be

done, when it is to be done, and who is to do it. One of the most convenient forms is to work out the program in terms of (1) definite proposals, purposes, and items; (2) goals that are to be reached; (3) ways and means of reaching the goals; and (4) individuals who are responsible for doing the job. Each one of these divisions is given a column on a ruled page such as is suggested in the national program form.

What should a program of activities contain? I have examined a great many programs of activities in various states of the country. I should say that there is not any one type of program that is better than any other. However, I believe it is possible to include what might be the essentials of any program. I shall list the following items:

1. The names of the national, state, and local officers, together with the separate local committees that have been assigned to do specific jobs.
2. A calendar of events for the year by months.
3. A detailed program of activities set up under the major heads.
4. A chapter budget for the year.

Who should formulate the program of work? Possibly we are agreed that the officers, with the help of the adviser, should formulate the program of activities well in advance of the beginning of school. It is not presumed that all the details will be worked out by the officers. A tentative program should be formulated by the officers and presented at a chapter meeting. Possibly some very fine contributions will be made by individual members. The committees that have been assigned to the various jobs should be given the responsibility of working out the details of individual assignments. It is desirable for one officer to be assigned the responsibility of checking with each committee.

After the program has been put in final form it should be mimeographed and distributed to every member of the chapter. For the average high school the program can be mimeographed at a very small cost. With copies of the program in the hands of every student it is possible and desirable to use a part of the regular, scheduled school time to study the proposed activities of the year.

A carefully planned program of activities of the local chapter of Future Farmers is the first meaningful sign of an efficient chapter.

At the end of each year the activities accomplished should be set up opposite the corresponding proposals. This procedure makes it possible to take a meaningful inventory of the year's work.

To summarize the important points which I have attempted to make: (1) The FFA has a legitimate and necessary part to play in a program for training boys in the business of farming. (2) It is in keeping with accepted practice to use a part of school time for chapter and leadership training activities in FFA. (3) If the local chapter of FFA is to function properly the local adviser must be prepared to provide active leadership in Future Farmer activities. (4) Leadership training must be given to the officers and members if the local chapter is to function properly. Activities in leadership training must be planned over a 12-month period and on a long-time basis. Finally I want to repeat the statement which I made earlier, "As with the adviser so with the chapter."

Getting at Leadership Training From All Angles

MARSHALL L. GEFKE, Teacher, Hinckley, Minn.

NO OTHER responsibility opens so wide and fertile a field for the local adviser as the training of FFA officers. An easy and all too common course in discharging the responsibility of training officers is to look for natural leaders. Frequently officers may be "railroaded" into office in a way that is not democratic. However, a close adherence to this method in selecting officers relieves the adviser of expending any extra time in training his officers.

How Select the Officers?

It is surprising how eager most students are to grasp responsibility. A little encouragement develops hidden leadership qualities. Such responses seldom fail to give one a keen sense of satisfaction, a real teaching achievement.

How can we as teachers of agriculture meet this responsibility in training Future Farmer officers? One of the major objectives in training chapter officers is to develop a deeper understanding and an appreciation of responsibilities, and to strengthen the abilities of the officers concerning their respective duties.

It is presupposed that a going chapter must have energetic and trained officers. Seldom, if ever, does one find an active chapter without a group of efficient officers. All too frequently these key officers are so-called *naturals* rather than results of *careful* training. We must not rely on this type of officer, but must train our officers to function like naturals in their respective offices.

Every officer should be trained and should grow in the power of self-mastery. He should make two recordings while he is an officer of his chapter; one on the members of his chapter and the other on his own nervous system. The reputation which an officer establishes as a result of his chapter activities is of vast importance to him both here and later on.

It is hardly necessary to say that character building is an important officer essential. Good manners, proper habits, correct speech, and clean living are but a few of the indirect, nevertheless essential, values that we should secure in our training.

Our teaching responsibility implies a definite educational objective regarding what shall be learned and how it shall be learned. These objectives must be attained. The *what* develops into teaching units such as officer duties, use of parliamentary law and effective use of ritual and correct speech. The *how* is not a difficult teaching job. Since the application of "doing to learn" is recognized as one of the fundamental principles of vocational education, our officers have a natural classroom for their learning process.

Methods Employed in Training Officers

Many methods have been used in stimulating officer efficiency. These include:

1. Individual counseling by adviser.
2. Group conference by adviser with all officers.
3. Sectional or state officer-training schools.
4. Summer leadership camps.

The adviser loses sight of an important teaching job if he fails to hold a few conferences with each individual officer about his problems. Because of limited time these conferences are sometimes postponed indefinitely, but to insure lasting guidance should be given when they are needed to insure the best results. All criticism should be given to stimulate a desire to improve. A little praise yields many returns.

Group Conferences Prove Effective

Group conferences of all officers provide an excellent opportunity to discuss officer relationships, purposes of specific responsibilities, and extra training in parliamentary law, and tend to stimulate a greater co-operative appreciation of why each officer must faithfully execute the duties of his office. Officer meetings furnish an opportunity to study the FFA Manual. It is of paramount importance to see that every officer is familiar with the national constitution, the history, the aims and the purposes of the Future Farmer organization, and the wealth of other material found in the new manual. These meetings also offer a chance for the officers to learn the various rituals used in the ceremonies for conferring the Green Hand and Future Farmer degrees.

Use of Special Training Schools

One of the greatest contributions made in stimulating and improving officer efficiency in our state was the result of a series of talks on officer duties and responsibilities by W. A. Ross, National Executive-Secretary. Many advisers were quick to see the stimulating effect of the increased activity that their officers showed after attending these meetings. Many states now conduct regular, district, and state leadership-training programs for the training of the chapter and state officers. The value of these meetings is readily seen in the improvement of poise and integrity of our officers each year.

Officer training has become such a pertinent problem that our national officers are now given a special training course to develop their abilities in their respective office responsibilities.

The ultimate results of this extensive training for our national officers are effectively demonstrated at the annual National FFA Conventions. Many adult organizations have not been able to do a better job of conducting a national meeting. The splendid manner in which our past national officers have extended their leadership training by their extensive itinerary to nearly every state association has left an indelible impression on thousands of Future Farmers.

I say, "Hats Off" to our National

FFA officers and adviser, and our National Executive Board, for the precedent they have established in stimulating a high caliber of leadership. It is a goal we should all strive to achieve.

Summer Leadership Camps

A comparatively new method in the training of chapter officers is thru summer leadership camps. Many of our southern states have been outstanding in developing state camps for a number of years. The enthusiasm shown at their first camps proved so successful that other states soon fell in line in adapting camps for both special summer recreation and leadership training. Now they are an integral part in most state programs of work.

District Camp Proves Successful

A short three-day leadership camp organized on a district basis was inaugurated in Minnesota last summer.* In the camps that were conducted last year, special training was given to officers who had been elected to office shortly before the close of school. In this way the newly elected officers are all set to start their respective duties as soon as school convenes in the fall. Past officers attending the camp as well as state officers assisted in instructing the new officers. Reference materials which we found helpful and which every chapter should include in its library of training officers consisted of:

1. Manuals for each officer.
2. Bound volumes of *The Agricultural Education Magazine.* (Many excellent articles have been written by leading vocational authorities which should be used, not buried.)
3. Copy of *Robert Rules of Order*, Scott-Foresman.
4. *Handbook for Future Farmers*, Henry C. Groseclose, French Bray Co.
5. *Forward FFA*, W. A. Ross, French Bray.
6. Bound copies of state and district news letters.

Officers, members, and advisers attending these camps have all acclaimed them as a successful contribution in meeting their objectives. This means that carefully planned programs must be provided if we are to utilize these camps for the purpose of developing leadership. We have a fertile field ahead of us and a real challenge in preserving and developing a great rural democracy.

*See "We Do It by Districts in Minnesota."—Peterson, Harry, *The Agricultural Education Magazine*, XIII, p. 136-7.

What a Mother Thinks of the FFA

MRS. JAMES LURTEY,
Washington, Kentucky

IN SEPTEMBER, 1916, I was one of a group of five boys and nine girls who became the first freshman class of the Washington High School. We chose agriculture as one of the subjects which we would study. We learned a great deal about crops, soils, plants, animals, trees, weeds, and insects, but we did not have any practical experience with them. We were assigned a certain number of pages to study and our grades depended on how well we could repeat the text material. Of that group only one boy became a farmer and about three of the girls still live on farms.

I don't know how long we have had the FFA organization in our school. I knew that the boys visited farms occasionally to see certain things being done, but I really knew nothing of this fine organization until my own son became a member nearly two years ago.

I immediately began asking questions. What was it all about? I found it was started about 1928. It began with local groups organized largely for social and recreational activities, but with certain educational, self-improvement, and cooperative features added. Then the idea spread to state groups as a tie for mutual interests and contacts with each local group as an active unit. This spread until soon it developed into a national organization with a constitution. I found the major aims of the Future Farmers of America are the development of agricultural leadership, co-operation, and citizenship. They have an emblem with its five symbols, the owl, the plow, and the rising sun within the cross section of an ear of corn, which is surmounted by the American eagle, a creed, their own colors, and a motto. These are all fine ideals to inspire our boys to a high plane of living.

What the Motto Means to Me

We are living today in a rapidly changing world. Nations are being changed overnight. In our own land we have seen many changes in the past quarter of a century. Instead of producing all you can, now we say produce to supply the demand, quality not quantity. The land is not as fertile as it was so we find we must use new methods in order to make farming pay.

So we come to the first part of the motto: *Learning to Do.* The FFA boy selects the project or projects he thinks he can do the best. He writes down what he is planning to do, carefully estimating the cost, the time, and what he hopes the result will be. He studies the latest method of work, also the way it is usually done in his locality—then draws his own conclusion.

The second part of the motto, *Doing to Learn*, complements the first. By doing the work my boy has an actual experience. It is no longer a theory. We parents have changed the way we rear our children. We no longer exact blind obedience. Today we ask obedience, but we discuss problems with our children and let them develop their own personality.

Now we come to the third part of the motto: *Earning to Live.* We know that the boys and girls of today are the men and women of tomorrow. All earnest thinkers are aware of the fact that after this war we are going to face a bankrupt and chaotic world. There will be a tremendous public debt and we are certainly going to need a trained leadership to cope with this situation. We parents are glad the FFA encourages thrift. I have heard my father say he worked for his father until he was 21 for his board and clothes. My father gave my brothers a share of the crops as they grew up. We are teaching our sons to learn to buy, and how to plan for their future needs, and how to take care of their own money.

Now we come to the fourth part of the motto: *Living to Serve.* We are glad to know that they have a part in helping to make the world a better place in which to live. We know Jesus said, "I came not to be ministered unto but to minister and to give my life as ransom for many." We find FFA members help make many worth-while enterprises in the community possible.

The Individual Is Important

Each member has a part in the FFA. There is the boy who is slow to express his opinion or knowledge in the classroom but who can do exceptionally good farm-shop work. Then there is the opposite type, the intellectual boy who can quickly master his subject but has hard work making a saw perform or driving nails. There is the average boy. There is opportunity to develop talent in music, speaking, and many other fine things.

I attended the district meeting at Minerva a short time ago and was greatly impressed with the size of the gathering and the speeches I was privileged to hear.

Finally, I like the spirit of co-operation between the teacher, the boy, and the parents. We parents are only too glad to help our sons plan their projects and help carry them out even if it calls for sacrifice. After all, our children are our most priceless possessions and we want to help them do the best. We parents of the Washington community are proud of our school, our teachers, our board members, and our boys. We want to do all we can to keep it progressing. Perhaps we can learn how we can co-operate more fully in the future.

Book Reviews

Practical Activities for Future Farmers. A. Webster Tenney, published by Interstate, Danville, Illinois, 318 pages, illustrated, list price $2.30. Eleven chapters are devoted to subjects of vital interest to FFA chapters. A chapter is devoted to each of the following topics: fairs, exhibits, tours, camps, parties, programs, banquets, library, plays, raising money, and maintaining an FFA chapter. Each topic is approached from the standpoint of the local FFA chapter. The appendix carries information on binding reports, pamphlets, and books and on how to take good pictures. It sets forth a plan of rating individual FFA members and carries information on FFA membership and national FFA winners. *Practical Activities* should prove helpful to all persons interested in promoting the welfare of the FFA, and should prove especially helpful to local FFA officers.—A.P.D.

Farm Buildings, by Deane G. Carter and the late W. A. Foster, third edition, 404 pp., illustrated, published by John Wiley & Sons, Inc., list price $3.75. While primarily designed to present the subject matter of a course in farm buildings for students in colleges of agriculture, the book will prove of value to teachers of agriculture in their work in farm mechanics.—A.P.D.

Book Reviews

This is Our Land, The Story of Conservation in the United States, by E. G. Cheyney and T. Schantz-Hansen, 337 pp., profusely illustrated, published by Webb Book Publishing Co., list price, $2.20. An excellent foreword by J. N. "Ding" Darling. Chapter I presents "Land With a Promise," and chapter II deals with "Opening Up America." The following subjects are each in turn given chapter emphasis: Soil, Water, Forest, Grass, Wildlife, Minerals and Mineral Fuels, and the Human Resources. This text is interestingly written and is designed to teach America, especially young America, what conservation is, the extent, value, and present status of the nation's natural resources. It is equally important that they know how these resources have been used and what should be done to take proper care of them. This book should constitute a most important source in the vocational agriculture libraries of America, for there is work to do in conservation wherever in the United States you may live—A.P.D.

Elements of Livestock Judging, by Wm. W. Smith, published by J. B. Lippincott Co., revised 1941, 294 pp., illustrated. List $2.40. In the revision the chapter on methods of teaching livestock judging has been eliminated, as such. The problems of method, such as the selection of the judging material, the types of judging exercises, the question of the best sequence of classes, and the development of the ability to write and to give oral reasons, are discussed and illustrated in connection with the subject matter pertaining directly to the different classes of animals. The materials on draft horses, unsoundness, and the determination of age, also the judging of mules, has been divided and the parts given separate chapter designations. A brief description of the breed-type features of each of the common breeds has been added. A chapter on the saddle horse has been included in the revised text. The book should prove helpful in teaching livestock judging, and should be of interest to all persons desiring to acquire and improve their ability to judge livestock.—A.P.D.

Practical Poultry Management. James E. Rice and Harold E. Botsford, fourth edition, published by John Wiley & Sons, Inc., 504 pages, illustrated, list price $2.75. The text is organized about the major activities in conducting the poultry enterprise. The authors consider efficient stock to be the essential key-factor in the successful management of a poultry enterprise, and accordingly open their text with the subject of culling. In the remaining chapters an effort has been made to secure a seasonal sequence thruout the year. The fourth edition includes the most up-to-date poultry science information. The plan of organization and the information contained make this book one that will be especially helpful to both the student of vocational agriculture and his teacher. A.P.D.

The diligent farmer plants trees, from which he himself will never see fruit.—Cicero.

Vocational Agriculture Moves South

"VOCATIONAL agriculture is moving south," writes Lorenzo Garcia Hernandez. Mr. Hernandez is regularly in charge of teacher-education in Puerto Rico. He has a three-month leave of absence which he is spending in the Republic of Colombia assisting in the work of organizing a program of vocational agriculture for that country.

L. G. Hernandez

The educators of Colombia became interested in vocational agriculture after seeing some of the results of programs under way in Puerto Rico. Mr. Hernandez writes that on August 11 he started a six-week training course for a group of prospective teachers of agriculture for the republic of Colombia.

To Beautify Farm Homes

(Continued from page 69)

2. Do not break the lawn space with trees, walks, drives, or clumps of shrubs. Keep the lawn open in the center and allow trees to form a framework for the lawn.

3. Leave natural curves and slopes as far as practical but grade the land sufficiently to get:

a. Proper drainage away from buildings and to prevent low pockets where water may stand in wet seasons.

b. A smooth surface that can be mowed.

4. Do not grade land when it is wet. Provide for all drainage away from buildings. If deep grading is necessary, remove the topsoil and replace it when completing the seed bed. Use tile for drainage when necessary.

5. Prepare a good seed bed by breaking the soil thoroly to a depth of six to eight inches, and by providing adequate organic matter. Pulverize and rake the seed bed well in advance of seeding time so that all weeds will be disposed of before seeding.

For quick starting apply well-rotted, barnyard manure, free from trash and weed seed. Mix well into the soil (about ½ ton to 1000 sq. ft.) a light application of commercial fertilizer high in nitrogen (4-10-6), spread and raked into the soil just before seeding, will give young grass a good start. (Use one and one-fourth pounds per square rod.)

6. Secure seeds from a responsible seed house. Use a mixture of 75 percent blue grass, 20 percent red top, five percent Italian ryegrass or perennial ryegrass.

7. Seed at the rate of four pounds for each 1000 square feet of area. Divide seed into four parts and broadcast, first crossing lawn in one direction, then at right angles, then diagonally, etc., in order to secure an even stand. Seed during the latter part of August and the first part of September.

8. When young grass is about three inches high, mow with a sharp sickle rather than with a lawn mower which will pull up many of the seedlings.

9. Roll the lawn lightly after seeding.

10. Keep the grass cut. Allow cuttings to fall on the lawn. This helps to keep up organic content. Cut the grass when it has attained one to one and one-half inches of growth.

References

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2. *Lawns*, Pennsylvania State College, Cir. 160
3. *Making the Lawn Attractive*, Landscape Series No. 3, W. Va.
4. *Beautifying the Farmstead*, Farmers' Bul. 1087, U.S.D.A.
5. *Home Beautification*, Cir. 315, W. Va.
6. *Extension Landscape News Letter*, Aug. 1939, West Virginia.

Agriculture and the War

(Continued from page 66)

who are primarily responsible for the bloodshed which is taking place today are those who have been loudest in their advocacy of peace. A war fought deliberately with the aid of psychology can only be countered by the skillful use of the same weapon. We, as a nation and as individuals, must realize the important part that words, both written and spoken, have upon the morale of our people and upon the decisions made by other nations.

The Task of Democracies

The task facing the democracies is a tremendous one but one which must be faced unflinchingly. The world has gone mad before and has recovered a reasonable degree of sanity. We have every reason to believe that right, as always, will prevail in the end. We can triumph over the powers of evil if we have courage enough to hold on.

George Washington, in a letter written at Mount Vernon on July 25, 1798, to Dr. James Anderson, describes a world situation remarkably similar to that which prevails today and I cannot do better than conclude this discussion with his words:

"I little imagined when I took my last leave of the walks of public life and retired to the shades of my vine and fig tree, that any event would arise in my day that would bring me again on a public theater; but the unjust, ambitious, intoxicated conduct of France toward these United States has been, and continues to be such, that they must be opposed by a firm and manly resistance, or we shall not only hazard the subjugation of our government, but the independence of our nation also; both being evidently struck by a lawless, domineering power, who respects no rights, and is restrained by no treaties when it is found inconvenient to observe them. . . . . When everything sacred and dear to free-men is thus threatened, I could not, consistent with the principles which have actuated me thru life, remain an idle spectator. . . . . "

Agriculture is destined to play an extremely important part in the conflict now raging and may well determine the future of democratic government in this country and thruout the world. In such a grave emergency no one should be content merely to remain an idle spectator.

Vocational Agriculture Education Directory

(October 1, 1941)

Only data furnished by state directors, state supervisors, or teacher-trainers have been included in this directory; workers in each state have been listed according to the following key.

d—State Directors

s—State Supervisors and Assistant State Supervisors

rs—Regional, District, or County Supervisors

cs—Colored Supervisors

t—Teacher-Trainers

it—Itinerant Teacher-Trainers

rt—Research Workers in Teacher-Training Institutions

pt—Practice School or Supervising Teachers

ct—Colored Teacher-Trainers

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rs—Howard F. Chappell, Sacramento
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s—E. O. Boiender, Columbus
t—W. F. Stewart, Columbus
t—H. G. Kenestrick, Columbus
t—C. E. Rhoad, Columbus
rt—Ray Fife, Columbus
pt—Ralph J. Woodin, Hilliards
pt—C. H. Clary, West Jefferson
pt—W. E. Stuckey, Summit Station
pt—Ralph E. Bender, Canal Winchester
pt—W. H. Wolf, Westerville

OKLAHOMA

ds—J. B. Perky, Stillwater
s—Bonnie Nicholson, Stillwater
rs—W. R. Felton, Stillwater
rs—S. M. Crosnoe, Stillwater
rs—Roy Craig, Stillwater
rs—Edd Lemons, Stillwater
t—D. C. McIntosh, Stillwater
t—Don M. Orr, Stillwater
t—Chris White, Stillwater
it—C. L. Angerer, Stillwater
pt—P. A. Norton, Stillwater
cs-t—D. C. Jones, Langston

OREGON

d—O. I. Paulson, Salem
s—Earl R. Cooley, Salem
s—Ralph L. Morgan, Salem
t—H. H. Gibson
pt—R. M. Adams

PENNSYLVANIA

d—Paul L. Cressman, Harrisburg
s—H. C. Fetterolf, Harrisburg
s—V. A. Martin, Harrisburg
rs—R. C. Lighter, Gettysburg
rs—J. S. Champion, Pittsburgh
rs—A. B. Young, Kittanning
rs—A. V. Townsend, Bedford
rs—E. W. Wood, Towanda
rs—W. J. Tucker, Bellefonte
rs—Norman Ratchford, West Chester
rs—J. Rex Haver, Lock Haven
rs—Harry Everett, Bloomsburg
rs—D. L. Cram, Meadville
rs—Harold Park, Carlisle
rs—C. J. Kell, Harrisburg
rs—B. E. Decker, Erie
rs—J. D. Martz, Jr., Indiana
rs—F. C. Bunnell, Brookville
rs—H. E. Newcomer, Scranton
rs—L. H. Lebo, Lebanon
rs—C. D. Carey, Williamsport
rs—E. C. Wiggins, New Castle
rs—A. C. Sproat, Mercer
rs—W. B. Frisbie, Stroudsburg
rs—S. L. Horst, Norristown
rs—Derl Hess, Sunbury
rs—H. W. Staiger, Coudersport
rs—G. F. Dye, Somerset
rs—G. D. Deer, Montrose
rs—T. W. Crittenden, Wellsboro
rs—C. F. H. Wuesthoff, Warren
rs—J. B. Park, Honesdale
rs—R. E. Seamens, Greensburg
rs—S. C. Hulslander, Tunkhannock
rs—T. M. Malin, York
t—Henry S. Brunner, State College
t—William A. Broyles, State College
t—C. S. Anderson, State College
t—William A. Hall, State College
it—Russell B. Dickerson, State College
it—D. C. Sprague, State College
pt—John W. Decker, Spring Mills

PUERTO RICO

d—Lloyd A. LeZotte, San Juan
s—Nicolas Mendez, San Juan
t—Lorenzo Garcia Hernandez, San Juan
t—Ernesto Vasques Torres, Mayaguez
rs—Juan Acosta Henriquez, Arecibo
rs—Juan Robles, Cayey
rs—Andres Ramirez, Mayaguez
rs—Samuel Molinary, San Juan

RHODE ISLAND

d-s-t—George H. Baldwin, Providence
t—Everett L. Austin, Kingston
pt—Thomas Maliff, Wakefield
pt—Ian M. Walker, Bristol
pt—John J. Callanan, Warren

SOUTH CAROLINA

d—J. H. Hope, Columbia
s—Verd Peterson, Columbia
s—W. C. James, Columbia
cs—W. M. Mahony, Anderson
cs—R. D. Anderson, Walterboro
cs—R. E. Naugher, Loris
t—W. G. Crandall, Clemson
t—W. C. Bowen, Clemson
t—T. A. White, Clemson
t—J. B. Monroe, Clemson
ct—J. P. Burgess, Orangeburg
ct—Gabe Buckman, Orangeburg

SOUTH DAKOTA

d—J. F. Hines, Pierre
s—H. E. Urton, Pierre
t—R. R. Bentley, Brookings
pt—Wilmer Davis, Brookings
pt—Ben Nelson, Volga
pt—Arlington Eddy, Brookings

TENNESSEE

d-s—G. E. Freeman, Nashville
rs—G. B. Thackston, Gallatin
rs—J. W. Brimm, Jackson
rs—L. A. Carpenter, Knoxville
t—N. E. Fitzgerald, Knoxville
t—J. B. Kirkland, Knoxville
rt—A. J. Paulus, Knoxville
rt—E. B. Knight, Knoxville
pt—C. F. Rollins, Corryton
pt—H. E. Gibson, Concord
pt—W. E. Robertson, Byington

TEXAS

d-s—Robert A. Manire, Austin
s—J. B. Rutland, Austin
rs—O. T. Ryan, Lubbock
rs—C. D. Parker, Kingsville
rs—C. B. Barclay, Commerce
s—B. C. Davis, Austin
t—Henry Ross, College Station
t—Malcolm Orchard, College Station
t—W. R. Sherrill, College Station
t—L. V. Halbrooks, College Station
t—J. L. Moses, Huntsville
t—W. E. Driskill, Huntsville
t—S. V. Burks, Kingsville
t—Ray L. Chappelle, Lubbock
it—T. L. Leach, Lubbock
it—F. D. Shackelford, Kingsville
pt—M. R. Henslee, Alice
pt—W. M. Gourley, Bishop
pt—C. W. Jackson, Bryan
pt—W. W. McIlroy, Caldwell
pt—R. M. Knox, Hearne
pt—L. K. Westmoreland, Huntsville
pt—R. C. Mitchell, Lorenzo
pt—J. M. Johnson, Lubbock
pt—G. H. Morrison, Madisonville
pt—W. F. Rudd, New Weverly
pt—A. C. Srtickland, Slaton
pt—L. M. Hargrave, Wolfforth
cs—J. C. McAdams, Crockett
cs—Gus Jones, Caldwell
cs—S. E. Palmer, Tyler
cs—E. E. Collons, Texarkana
cs—B. S. Luter, Prairie View
ct—E. M. Norris, Prairie View

UTAH

d—Charles H. Skidmore, Salt Lake City
s—Mark Nichols, Salt Lake City
t—L. R. Humpherys, Logan
pt—Leslie Nelson, Brigham City
pt—Albert Noall, Brigham City
pt—John Olsen, Brigham City
pt—Edward Ward, Brigham City
pt—LeRoy Bunnell, Tremonton
pt—H. M. Skinner, Garland
pt—Charles H. Last, Garland

VERMONT

d—John E. Nelson, Montpelier
s-t—W. Howard Martin, Burlington
s-t—Charles L. Park, Jr., Burlington
pt—Paul Gilman, Thetford
pt—J. Arthur Peters, St. Johnsbury
pt—Wayne Twombly, Brandon
pt—Francis Marseeill, Hardwick
pt—James Woodhull, Derby
pt—Harold Potter, Chester
pt—Raymond Rogers, Bradford
pt—Roland Whiting, Johnson
pt—Stanley Tenny, Hinesburg
pt—Donald Grady, Essex Junction

VIRGINIA

d—Dabney S. Lancaster, Richmond
s—Walter S. Newman, Richmond
rs—F. B. Cale, Appomattox
rs—T. V. Downing, Ivor
rs—J. O. Hoge, Blacksburg
rs—D. J. Howard, Winchester
rt—Olive A. Salem, Blacksburg
t—Harry W. Sanders, Blacksburg
t—Henry C. Groseclose, Blacksburg
t—E. Y. Noblin, Blacksburg
t—C. E. Richard
ct—G. W. Owens, Petersburg
ct—J. R. Thomas, Petersburg
ct—Roscoe L. Lewis, Petersburg

WASHINGTON

s—J. A. Guitteau, Olympia
t-s—E. M. Webb, Pullman
t-s—Bert L. Brown, Pullman
pt—Lewis Porter, Pullman

WEST VIRGINIA

d—W. W. Trent, Charleston
s—John M. Lowe, Charleston
s—H. N. Hanaucker, Charleston
t—M. C. Gaar, Morgantown
it—D. W. Parsons, Morgantown
it—A. D. Longhouse, Morgantown
pt—C. W. Hill, Morgantown
pt—S. J. Weese, Blacksville
pt—O. D. White, Morgantown

WISCONSIN

d—George P. Hambrecht, Madison
s—Louis M. Saaman, Madison
t—J. A. James, Madison
t—V. E. Kivlin, Madison
t—V. E. Nylin, Platteville
t—J. M. May, River Falls
it—Ivan Fay, Madison
it—Clarence Bonsack, Madison
pt—Harold J. Morrissey, Oregon
pt—Willis D. Freitag, Columbus
pt—C. B. Campbell, River Falls
pt—L. A. Bensend, Platteville
pt—W. Jueds, Lancaster

WYOMING

ds—Sam Hitchcock, Cheyenne
s—Jack Ruch, Cheyenne
t—L. A. Crawford, Laramie